‘Archi-Texts’ for Contemplation in Sixth-Century Byzantium: The Case of the Church of Hagia Sophia in Constantinople

Vol. I

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I hereby declare that this thesis has not been submitted, either in the same or different form, to this or any other University for a degree.

....
Iuliana-Elena Gavril

ταῦτα θαῦμα μὲν ὑπῆρχεν ἰδεῖν, κέρδος δὲ μαθεῖν, ἀδίκημα δὲ σιωπῇ κατακρύπτεσθαι.

These things were a wonder to see, a benefit to learn of, and a crime to hide away in silence.

Ps.-Nikolaos,
Progymnasmata

Iuliana –Elena Gavril
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SUMMARY

**'Archi-Texts' for Contemplation in Sixth-Century Byzantium:
The Case of the Church of Hagia Sophia in Constantinople**

This thesis aims to contribute towards a better understanding of what the Byzantines experienced in church spaces. By thoroughly mapping users' encounters with the church of Hagia Sophia in Constantinople in the sixth-century, it examines whether the experience of the architectural space during the Eucharistic ritual augmented a religious experience, which in turn, influenced the way the Byzantines talked about their spiritual experience whilst being in a church, and thought of their churches as 'heaven on earth.' It places textual evidence alongside architectural evidence. The basic approach of this thesis is rooted in phenomenology and multi-sensory perception of space.

In the first chapter, I make a case for the necessity of studying the textual evidence in light of the spatial experience of the building. I suggest that the concept of 'archi-text' is key to answering the question of what was a church in sixth-century Byzantium. Developed in three chapters, the textual analysis focuses on sixth-century *ekphraseis* of Hagia Sophia written by Procopius of Caesarea and Paul the Silentiary, and the inauguration *kontakion* composed for the church dedication. In the first two chapters, I examine how the spatial perception of the church influenced the way Hagia Sophia was described. In the next chapter, I explore how the Byzantines thought of the church in symbolic and theological terms. The literary analysis concludes that Hagia Sophia was perceived as a centralised space and represented as a 'heaven on earth.' These two points are further scrutinized all through the spatial analysis of the church. The final chapter links the Byzantines' symbolic representation of the church to the architectural physicality of Hagia Sophia.

A NOTE ON TRANSLATIONS AND TRANSLITAERATIONS

For this thesis I translated both fragments and entire Greek texts myself. When available, I used English translations, but always checked them against the original texts. All the translations used are marked in the footnotes. In transliterating Greek names of people, places, literary and theological terms, I followed the system used in the *Oxford Dictionary of Byzantium*. However, well-known and standardized English equivalents of Greek names, such as Procopius of Caesarea, or Paul the Silentiary, have been retained. In so doing, I have maintained the contradictory nature of much Byzantine scholarship when it comes to spelling.

ACKNOWLEGMENTS

The topic of this thesis could have not been researched anywhere else but at the University of Sussex. It was Professor Liz James who showed a great interest in my project from its early stages. She encouraged me when I seemed lost, and more importantly, kept an eye on my time. Without Liz's telling suggestions for re-structuring my thesis, my argument would not be as clear as it is now.

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TABLE OF CONTENTS

ABBREVIATIONS

Acta Psychol – Acta Psychologica

AH – Art History

AJA – American Journal of Archaeology

ALw – Archiv für Liturgiewissenschaft

An Tard – Antiquité Tardive

Annu Rev Psychol – Annual Review of Psychology

Appl Linguist – Applied Linguistics

BMGS – Byzantine and Modern Greek Studies

Brit J Psychol – British Journal of Psychology

BS I – Byzantinoslavica

ByzZ – Byzantinische Zeitschrift

CahArch – Cahiers Archéologiques

CFHB – Corpus fontium historiae byzantinae

CPh – Classical Philology

Crit Inquiry – Critical Inquiry

DOP – Dumbarton Oaks Papers

EAB – Environment and Behavior

Environ Plann B – Environment and Planning B: Planning and Design

GRBS – Greek, Roman, and Byzantine Studies

Hist Theory – History and Theory. Studies in the Philosophy of History

IstMitt – Istanbuler Mitteilungen, Deutsches Archäologisches Institut, Abteilung Istanbul

J Appl Psychol – Journal of Applied Psychology

J Mem Lang- Journal of Memory and Language

JAAC– The Journal of Aesthetics and Art Criticism

JJECS – Journal of Early Christian Studies

JEH– Journal of Ecclesiastical History

JHS – Journal of Hellenic Studies

JÖByz – Jahrbuch der Österreichischen Byzantinistik

JSAH – The Journal of the Society of Architectural Historians

JWarb – Journal of the Warburg and Courtauld Institutes

OC – Oriens Christianus

OCA – Orientalia Christiana Analecta

OCP – Orientalia Christiana Periodica

ODB – The Oxford Dictionary of Byzantium, ed. A. Kazhdan *et al.* (New York–Oxford, 1991)

OrSyr – Orient Syrien

PG – Patrologia cursus completes. Seria greaca (J.P.Migne, ed.)

Q J Exp Psychol-A – Quarterly Journal of Experimental Psychology Section A- Human Experimental Psychology

RAC – Reallexikon für Antike und Christentum

Rend. Pont. Acc. Rom. Arch – Rendiconti della Pontificia Accademia Romana di Archeologia

Rhetores Graeci – Bibliotheca scriptorium Graecorum et Romanorum Teubneriana-Rhetores Graeci

SC – Sources Chrétiennes

Soil Dyn Earthq Eng – Soil Dynamics and Earthquake Engineering

TAPA – Transactions and Proceedings of the American Philological Association

TM – Travaux et mémoires

VChr – Vigiliae Christianae

Vision Res – Vision Research

WordImage – Word&Image

YFS – Yale French Studies

INTRODUCTION: Looking for a Church with a View

The claim that a church building is more than a spatial setting for Christian rituals has been made almost every time a scholar has studied the architectural material of church buildings and their descriptions. The frequency of the claim compels me to readdress a basic question in my attempt to explore the potential of church architecture to influence those who encountered and used it for various purposes in Byzantium. What is a church building? To date, the answers have been as varied as the scholars' interests, which span architecture, art history, rituals, spirituality and Christianity itself. Church buildings have been regarded as symbols for the sacred, however defined, expressions of theological concepts, bearers of meaning or direct participants in the construction of meanings, and spatial icons of the Christian community. This highlights how complex a subject church architecture can be.

The complexity rests on several established facts: the diversity of church building-types across space and time; the manifold expressive and symbolic functions attached to churches; and the wide range of users with varying worship needs, who may hold contrasting social and cultural representations of Christianity. The question 'What is a church building?' leads to answers that are multifaceted and that have extremely complex ramifications, while the implications extend beyond common assumptions relating to the function of a building. A simple answer may emerge only when there is a focus on one facet of church architecture, such as the social or aesthetic origins of early church architecture, or the historical development of churches, and when that facet is rigorously studied within specific methodologies and approaches to art or theology.

It is well know that a methodology is more likely to be successful if confined to one discipline. However, a focus on one discipline develops specific concepts which often bear little relation to those of other disciplines. In architecture, for instance, aesthetic concepts are often only vaguely articulated, whereas in theology, the discussion on beauty relies on sophisticated philosophical and moral ideas. Moreover, a methodology predetermines, to a certain extent, the conclusions. This might explain why a productive meeting between theologians, liturgists, art historians, and

architects has so far remained unrealised. In this respect, my thesis tries to build methodological bridges across the divide between two major fields, architecture and theology, and, consequently, my project takes an interdisciplinary approach to the interpretation of church buildings. Nonetheless, the present study has been undertaken in full awareness of what is gained and lost when I focus solely on the interplay between architecture and theology.

In this thesis, I will specifically work within the sub-disciplines of architectural phenomenology, liturgical studies and spirituality in order to understand how a church building was regarded in Byzantium and how it functioned at various levels. This choice reflects both my educational background and scholarly interests. Trained as an architect but also a graduate of theology, I trust that in researching this topic, the architect can meet the theologian half way. I do not privilege the architect's point of view in understanding how church buildings function over the theologian's interpretation of churches in the construction of spiritual meanings.

One of my interests is to provide an overarching picture of what a church building was in a given period. Since different methodologies yield different results, I need to combine them in new ways to see whether the experienced purpose of church buildings can shed light on how churches were regarded by their users. In this thesis, I suggest that one way to get to the core essence of church buildings is to investigate what they were used for from the perspective of what was ultimately experienced within their walls. Therefore, the emphasis is on the users and their experience of being in a church, as I seek to answer questions such as: what did it mean for a believer to enter a church building? What kind of spiritual experiences did a church building bring about when it was used for rituals or contemplated for its own sake? How did the faithful exploit what was sensed and perceived in a church in order to communicate with, and represent, God?

When I embarked on my research programme, such questions had not been asked in the field of Late Antiquity or Byzantine studies. What the faithful experienced within church walls, although acknowledged, has never been at the core of any academic study.[1] Instead, scholars have been engrossed in questions of why and how communities built their churches in the way they did, or how Late Antique and Byzantine churches conveyed meanings by themselves, but never what individuals

[1] See, for instance, Linda Safran (ed.), *Heaven on Earth: Art and the Church in Byzantium* (University Park, Pennsylvania State University Press, 1997).

experienced when using church spaces.[2] Nor has there been much focus on questions of how and why the Byzantines came to a specific understanding of what a church building should be.

More recent publications in the field of Late Antiquity studies have started to focus on the communities who built, gathered and prayed in churches, and how those people related to God. The issue of how church spaces facilitated the communication between God and Christians has been specifically addressed in a recent exploration on the development of the saints in Late Antiquity.[3] Analysing both the visual and material manifestations of saints, Ann Marie Yasin has argued that images of saints, as well as relics, functioned as social and spiritual catalysts. Churches bound Christians together and directed them as one community-body towards God. According to Yasin, the veneration of saints became crucial to understanding how churches began to be regarded as sacred places. Whilst this is a cogent point, Yasin's conclusion was predetermined by the approach she embraced, i.e. that sacred spaces were socially constructed. This means that the holiness of a church building was generated from, and affirmed during, a social experience, rather than from a sensory, aesthetic, religious experience or from a devotional type of behaviour.[4] In other words, the relationship between Christians and God was manifested in both the attempt and the result of attributing power to objects and spaces, in which power itself was a social construct regulating human and human-divine relations.[5]

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[2] Cyril Mango, *Byzantine Architecture* (New York: Harry N. Abrams, Inc., Publishers, 1974), Richard Krautheimer, *Early Christian and Byzantine Architecture,* 4th edn (Yale: Yale University Press, 2002), William L. MacDonald, *Early Christian and Byzantine architecture* (New York: George Braziller, 1962), Robert Ousterhout, *Master Builders of Byzantium* (Princeton: Princeton University Press, 1999), Jean Lassus, *Early Christian and Byzantine World* (London: Paul Hamlyn, 1967).

[3] Ann Marie Yasin, *Saints and Church Spaces in the Late Antique Mediterranean: Architecture, Cult and Community* (Cambridge: Cambridge University Press, 2009).

[4] Place as a sociological construction of the sacred is developed by Jonathan Smith who takes up the Durkheimian reference of sacred and profane as a dualism. Smith reacted to Mircea Eliade's point that sacred space is a response to the eruption of the sacred in time and space. See, Jonathan Z. Smith, *To Take Place: Toward Theory in Ritual* (Chicago: Chicago University Press, 1987) and Mircea Eliade, *The Sacred and the Profane: The Nature of Religion*, trans. by Willard R. Trask (New York: Harcourt, Brace and Company, 1959).

[5] Such a sociological analysis has also been employed to explain why the Christian community made the architectural shift from houses to basilicas and how it subsequently influenced the development of worship and theology. White drew on archaeological and textual evidence; however, he concluded that this architectural transition 'just happened.' See, L. Michael White, *Building God's House in the Roman World: Architectural Adaptation:* Among *Pagans, Jews, and Christians (*Baltimore: Johns Hopkins University Press, 1990), reprint as Vol. 1 of *The Social Origins of Christian Architecture* (Valley Forge: Trinity Press International, 1996] also, *The Social Origins of Christian Architecture*, vol. 2: Texts and Monuments for the Christian *Domus Ecclesiae* in its Environment Imprint (Valley Forge: Trinity Press, 1997); White, *Building God's House in the Roman World,* pp. 4-5, 147-148.

My thesis shares some of these themes but it takes a complementary approach, valuing in equal measure phenomenological and sociological approaches to sacred spaces.[6] It concentrates on the relationship between Christians and God as an ontological transformation, which constitutes a defining religious experience, both subjective and individual, yet my approach also allows room for a discussion of power as a human social construct. In contrast to Yasin's approach, the focus here is on architectural forms and spatial configurations in assisting the encounter between the faithful and God. This is the first time that the customary experience of church architecture has been used as a point of departure for an investigation into its effect as a potential catalyst, which leads to religious experience. To this end, I will look into the ways church layouts conditioned people's movements during liturgical events, influenced people's behaviour within sacred spaces, shaped emotional responses that led to a binding religious awareness of God's proximity, and ultimately influenced the way viewed and talked about their churches.

Consequently, my thesis does not take a traditional approach to the study of church architecture, although it does deal with buildings. Instead, I look at church buildings in their performative or eventful role, exploiting the interaction between buildings and users during specific liturgical events. Furthermore, in this thesis, the concept of architectural function relates to the attributes of architecture, such as utility, solidity, expressivity and informativenesses, which are appraised every time spaces are used for various purposes. The working assumption is that church architecture serves an immediate, utilitarian end, such as the celebration of the Eucharist, while at the same time fulfilling a different, albeit related, spiritual need: the human urge to connect with God. Between these two ends, aesthetic, cognitive and other demands are fulfilled.[7] For the architectural analysis of church buildings, I will look at architectural forms and spatial appearance, while the following questions will be discussed: is the spatial form experientially and spiritually relevant? Does the articulation of a church space support direct engagement between the faithful and

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[6]David Morgan argued that scholars should not choose between the sociological and phenomenological approach to religion and sacred spaces, which I share. See, Morgan, 'Materiality, Social Analysis and the Study of Religions', in *Religion and Material Culture: The Matter of Belief,* ed. by David Morgan (London-New York: Routledge, 2010), pp. 55-74.

[7] See, for instance, Abraham Maslow's discussion on aesthetic and cognitive needs along the hierarchical basic needs which range from survival and safety to self-actualisation and self-transcendence; Maslow, *Motivation and Personality*, 3rd edn (New York: Harper and Row, 1987); also, William Huitt, 'Maslow's hierarchy of human needs,' in *Education Psychology Interactive* (Valdosta, GA: Valdosta State University, 2007) [Retrieved May 2010], http://www.edpsycinteractive.org/topics/regsys/maslow.html.

God? What aesthetic and spiritual consequences does the formal articulation of church space have for professing values and the practice of faith? Could a given spatial appearance change the way church buildings were looked at?

To answer these questions, I draw on architectural and textual evidence from sixth-century Byzantium. This temporal-spatial frame is somewhat conditioned by three interrelated phenomena that appeared in Byzantine culture of that time: the constructions of domed basilicas, the development of architectural hermeneutics or the symbolical interpretation of church buildings, frequently in cosmological terms, and the definite character of the Byzantine Liturgy. The textual evidence for a symbolic understanding of the Christian place of worship, aside from the biblical texts goes as far back as the third century.[8] However, it was only during the first half of the sixth century that a compelling and cogent understanding of what a church building was, and should be, crystallised and remained defining for the Byzantines. Although I will discuss the theological and cosmological symbolism of church buildings in Byzantium, especially of domes, this thesis is not about the origins of architectural symbolism in Byzantium, nor about the dome as a symbolic form.[9]

The Byzantine conceptual metaphors of 'heaven on earth' and 'the vault of heaven' in addition to comprehensive statements detailing the attributes of church buildings as a *domus dei*, meeting point, sacrificial altar and a place of worship, were promulgated in public events such as church dedications and disseminated in *ekphraseis* of church buildings.[10] The vision of a church as 'heaven on earth' as well as the dome representing the 'vault of heaven' may or may not have been the reasons behind the design of buildings and domes in Byzantium. Because there is no sure way to explore how certain ways of thinking were translated into the Byzantine built forms, as has been achieved in the case of Gothic architecture by Erwin Panofsky, I need to focus on what was experienced inside the buildings.[11] Thus, by relying on circumstantial

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[8] For a brief but up-to-date account of the symbolic interpretation of church architecture, see McVey, 'Spirit Embodied: The Emergence of Symbolic Interpretations of Early Christian and Byzantine Architecture', in *Architecture as Icon: Perception and Representation of Architecture in Byzantine*, ed. by Slobodan Ćurčić and Evangelia Hadjitryphonos (New Haven and London: Princeton University Art Museum, 2010), pp. 39-71.

[9] The only study of the dome as a symbolic form, though out of date, remains Baldwin Smith, *The Dome: A Study in the History of Ideas* (Princeton-New Jersey: Princeton University Press, 1950).

[10] For attributes of churches, see Harold Turner' discussion of the four functions of the sacred place as a centre, a meeting point, microcosm of the heavenly realm, and as immanent-transcendent presence; Turner, *From Temple to Meeting House: The Phenomenology and Theology of Places of Worship* (The Hague-New York: Mouten Publishers, 1979), esp. ch 2, pp. 13-31.

[11] Erwin Panofsky, *Gothic Architecture and Scholasticism,* 2nd edn (New York: Penguin, 1985).

evidence, I will be able to explore whether what was experienced in the churches played an important role in envisaging Byzantine churches as 'heaven on earth.' As a result, various parameters that have previously been considered separately (theological, liturgical, social, historical, aesthetic, and spiritual) will be collated in this thesis. These parameters represent conditional stances in using buildings and types of responses to, or interactions with, church buildings. From this perspective, my approach to church buildings and their descriptions is, in the main, phenomenological.

In order to understand how church buildings were experienced, how a peculiar articulation of spaces affected their users and how users changed the way of looking at buildings, I place textual evidence alongside architectural evidence. In this light, my thesis is as much about church buildings as about their descriptions. My approach to textual evidence builds upon the work of Liz James and Ruth Webb on Byzantine *ekphrasis* but, at the same time, it departs from it.[12] What interests me in relation to *ekphraseis* of church buildings is the degree of factual information that has been handed down to us about the experience of using, and making use of, church buildings as well as the role played by perceptual experience in shaping the view of a church building as 'heaven on earth.' The experience of using church buildings can only be understood if it is approached via sensory spatial perception. In this way, my thesis contributes to the study of Byzantine *ekphraseis* of church buildings, by exploring for the first time the employment of perceptual metaphors in *ekphraseis,* and clarifying the ways in which sensory perception informed the religious discourse on church buildings and, ultimately, architectural symbolism.

Additionally, by contrasting textual and architectural evidence, I thoroughly analyse the descriptions and interpretations of church buildings in light of their extant architectural configurations. The most appropriate evidence from the sixth century is the imperial church of Hagia Sophia, or the Great Church, in the capital of the Byzantine Empire, Constantinople (Figs. 1-6). Both the church building, altered as it is by structural consolidations and functional changes, and a relatively large body of sixth-century literary pieces ranging from *ekphraseis* to inauguration hymns, have survived to the present day (Figs. 7-9). Hagia Sophia is arguably one of the most studied architectural objects in the world and its descriptions have received much scholarly attention within Byzantine studies. However, the particular symbolic-

[12] Liz James and Ruth Webb, '"To Understand Ultimate Things and Enter Secret Places": Ekphrasis and Art in Byzantium', *AH,* 14 (1991), pp. 1-17.

spiritual reception of the church has never been considered in view of the spatial experience offered by its unique design. This is the first time that Hagia Sophia's descriptions have been approached from this angle. In addition, although I use an iconic building as a case study, my thesis advocates an interdisciplinary approach centred on extant buildings and their reception in a given time.

The introduction is divided into five sections. First, I will state my aims and formulate my research questions. The second part accounts for the sixth-century church of Hagia Sophia in Constantinople as a crucial case study for my thesis. Then, in the third part, I will trace through approaches to church architecture. The fourth part focuses on methodological issues in order to develop my own analytical framework pertaining to the Byzantine material. I will then define key terms such as encounters with buildings, and architectural and religious experience. Finally, I will provide the detailed structure of my thesis.

1. Aims and Questions

My thesis aims to articulate an exact and engaged analysis of the role played by sixth-century church buildings in the lives of the Byzantines, and to explore spiritual consequences in depth. It ventures to discuss the ways in which church architecture could express and enhance the experience of God during the Eucharistic ritual in Early Byzantium. To this end, I specifically focus my research on the question of the extent and ways in which church architecture in sixth-century Byzantium was perceived by its users as a direct catalyst for religious experience. By thoroughly mapping the encounter with the church of Hagia Sophia in Constantinople, I will address, as exhaustively as possible, within the constraints of evidence and space, a set of questions about the experience of being in a church. Because a number of questions arise from the interaction between architectural space, aesthetics and religious experience, I will use these questions as a framework to explore the spiritual consequences of the architectural experience of churches.

The first question I shall raise, in terms of sequence rather than of importance, is how the Byzantines physically encountered the church of Hagia Sophia. The second question is how the spatial layout of Hagia Sophia was read, in other words, how the Byzantines engaged with the built form and conceptualised the architectural space.

Hagia Sophia provides the context through which to examine whether the spatial form was experientially relevant when describing and using church buildings, and making use of those buildings. These two questions will be addressed while I examine sixth-century textual evidence in the first two chapters. The scrutiny of textual evidence continues in the third chapter, where I investigate how the Byzantines described Hagia Sophia in theological terms. This extensive literary analysis prepares the ground for the next question, addressed in the fourth chapter: whether the articulation of church spaces supports direct engagement, other than social interaction, such as an encounter with God. The last questions are addressed in the fifth chapter. While discussing the aesthetic and spiritual consequences of the formal articulation of the church space of Hagia Sophia, I seek to appraise the overall effect upon the beholders of the architectural experience offered by Hagia Sophia's spatial configuration. In particular, I will address the question of the extent to which the architectural experience of Hagia Sophia worked as a direct catalyst for religious experience during the Early Byzantine Liturgy. This will help to clarify the relationship between the spatial appearance of an architectural form, in general and the way the church of Hagia Sophia in particular were viewed.

The issues outlined above have never been addressed, yet they are essential in any discussion that attempts to elucidate the role played by church buildings in the lives of the Byzantines and in the construction of their religiosity. My examination of all of these issues will take into consideration the concord between art, theology and spirituality in Byzantium, which resulted in a rich tapestry of conceptual metaphors, popular beliefs and worldviews. Since the experience of a building is not confined to the spatial perception of its architectural forms, the analysis needs to include metaphors and popular beliefs in order to evaluate the complex functioning of a Byzantine church building. However, as an architectural historian, I find that such concepts and beliefs are better understood if they are discussed in the context of critical evaluations of buildings and architectural judgements of the time. Investigating where such beliefs originated from and how they have been subsequently cultivated by the Byzantines is fundamental to our understanding of Byzantium. By asking the questions in the proposed sequence, I aim to shed light on how key Byzantine beliefs, such as the church building representing 'heaven on earth', have been articulated.

2. A Church with a View: Hagia Sophia in Constantinople as a Case Study

The specificity of sources regarding church architecture from the perspective of its potential to assist the encounter between God and the faithful in Byzantium has been critical to my choice of case study. For an art historian, the most convenient way to learn about how some people experienced and regarded church architecture is to examine literary texts in which church buildings are either architecturally described and/or symbolically interpreted. When exploring the spiritual potential of church architecture, it makes sense to begin the investigation with first-hand accounts that describe building programmes, and the intentions of patrons/builders to embody certain theological ideas and/or religious worldviews within church architecture. Amongst such texts, those which contain plain statements that church buildings were designed as an aid for the contemplation of God prove to be crucial for picturing how the people integrated church buildings into their religious life. Yet there is no Byzantine text that explicitly states the intentions of patrons or builders to build a church as an object of mystical contemplation.

The only Christian source purposefully written to highlight the spiritual catalyst for church architecture is Abbot Suger's generic treatise on Gothic architecture.[13] Suger is credited with designing the 'first Gothic cathedral', dedicated to the patron saint of France, St.-Denis, near Paris in the twelfth century. His autobiographical account, *Liber de rebus in administratione sua gestis* and *Libellus alter de consecration ecclesiae Sancti Dionysii* is as singular as it is unique in the history and theory of architecture because it contains plain statements about the ultimate spiritual purpose of sacred architecture.[14] Since Suger's treatise gives an idea of what a church could achieve and how it contributes to religious experience, I will temporarily digress from the Byzantine material and dwell on Suger's treatise. My detour aims to offer quasi-criteria in my quest for the selection of the most appropriate Byzantine sources pertaining to church architecture as a catalyst for the religious experience.

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[13] Abbot Suger, *On the Abbey Church of St. Denis and Its Art Treasures,* ed., trans. and annotated by Erwin Panofsky, 2nd edn (Princeton: Princeton University Press, 1979).

[14] Panofsky, 'Introduction', in *On the Abbey Church,* p. 21, Otto von Simson, *The Gothic Cathedral: Origins of Gothic Architecture and the Medieval Concept of Order* (Princeton: Princeton University Press, 1956), p. 102; Hanno-Walter Kruft, *A History of Architectural Theory: from Vitruvius to the Present* (London: Zwemmer, New York: Princeton Architectural Press, 1994), p. 34.

Suger not only painstakingly detailed his intention to materialise his distinct views on church architecture, but he also expressed his own satisfaction in having achieved this by rebuilding the abbey of St.-Denis. What is notable is his desire to undertake a work that could induce a transformative experience. The dedicatory verses written on the cast-iron and gilded doors of the church summarise the point:

> Bright is the noble work; but nobly bright, the work
> Should brighten the minds, so that they may travel,
> Through the true lights,
> To the light where Christ is the true door.
> In what manner it be inherent in this world the golden door defines:
> The dull mind rises to truth through that which is material
> And, in seeing this light, is resurrected from its former submersion.[15]

The abbot deftly argued that the various objects that embellished the church could be admired for their form and their materials, but that they were not to be viewed as an end in themselves since 'the work surpassed the material.'[16] For Suger, precious liturgical accoutrements were merely a means to direct human minds from the material to the immaterial. Likewise, shiny surfaces and coordinated light through stained glass were to act as 'analogical' windows. These aspects helped the contemplative process by analogy. It can be concluded that the ultimate function of Suger's cathedral as a whole was to satisfy the human urge to reach God, or in other words, the purposeful experience of architecture was to direct people towards God.

The standard view that Suger had embraced Neo-Platonism with its specific contemplative mode, and applied it accordingly in his building programme at St.-Denis, has recently become a matter of dispute amongst scholars. Panofsky's claim that Suger materialised the sixth-century Pseudo-Dionysius' metaphysical theory of anagogical illumination in architecture has been challenged and, to a certain extent, refuted.[17] Otto von Simson's similar vision that Suger's treatise represented the hierarchical categories of Pseudo-Dionysius has also been questioned. Current scholarship has therefore disputed Suger as both the designer of a theological-

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[15] Abbot Suger, *De Administratione* XXVII, 25: 'Nobile claret opus, sed opus quod nobile claret,/ Clarificet mentes, ut eant per lumina vera/Ad verum lumen, ubi Christus janna vera./ Quale sit intus in his determinat aurea porta:/Mens hebes ad verum per materilia surgit,/Et demersa prius hac visa luce resurgit. English trans. by Erwin Panofsky in *On the Abbey Church of St. Denis,* p. 47-49.

[16] Abbot Suger, *De Administratione* XXXIII, 39: 'materiam suprabat opus', p. 62.

[17] Peter Kidson, 'Panofsky, Suger and St. Denis', *JWarb,* 50 (1987), pp.1-17; Jan Van der Meulen and Andreas Speer (eds.), *Die fränkische Königsabtei Saint-Denis: Ostanlage und Kultgeschichte* (Darmstadt: Wissenchaftliche Buchgesellschaft, 1998); Susanne Linscheid-Burdich, *Suger von Saint-Denis. Untersuchungen zu seinen Schriften Ordinatio - De consecratione - De administratione. Beiträge zur Altertumskunde,* 2000 (München-Leipzig: K.G. Saur, 2004).

architectural thought and the perpetuator of Neo-Platonic contemplative theory with its underlying aesthetics in medieval times. Notwithstanding these reappraisals, I shall argue that Suger's experience of being in the church dedicated to St.-Denis still vouches for the transformative quality of the architectural object.

Whether the source of inspiration for Suger's design did indeed lie in Pseudo-Dionysius or in other medieval texts bears little significance to the appreciation of church architecture as a catalyst for the religious experience.[18] Suger's writings explain how church architecture functions as a religious catalyst for his religious experience. I would contend that Suger's view on the functions of art and architecture can be securely evaluated from the perspective of his personal encounter with the church. Thus, Suger's contribution to the discussion on the functions of religious art and architecture lies not so much in his desire to materialise in stone a contemplative practice or a theological subtlety, but rather in his subjective evaluation of what church architecture could perform once the beholder entered the building. His view is valuable because it shows what church architecture could have meant for some people, and how it could have been used by people in the past. An awareness of this view will help me when I read the Byzantine sources in order to build up my case study.

Looking at the Eastern sources, it becomes apparent that the Byzantines never felt the need to explicitly state their intention of building churches as contemplative architectural objects; if they did pen such texts, they have not been handed down to us or they are yet to be discovered. However, there is still a vast bulk of Byzantine material that parallels Abbot Suger's experience to some extent.[19] The Byzantine body of evidence comes from texts belonging to different literary genres, which range from *enkomia* of church buildings or *panegyrics* on edifices and inauguration hymns, to homilies and *kontakia*. Most of these employ specific rhetorical techniques, such as *ekphrasis*.[20] Although commissioned by emperors and/or composed to be performed in front of an audience at special events, these texts convey, in various degrees, the

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[18] The medieval sources identified by Susanne Linscheid-Burdich are *Historia compostellana*, the rule of Benedict, Caesarius of Arles' *Sermones,* and Isidor of Seville's *De ecclesiasticis officiis* next to the Bible and biblical commentaries.

[19] There is a large body of epigrams on sixth-century icons which support the idea of icons as aids for contemplation of God, see *Anthologia Graeca,* [*The Greek Anthology* I,34] ed. and trans. by W.R. Paton, [Loeb edn] (London: Heinemann Ltd, 1916); also, Peers' discussion on the role of art in worship, Glenn Peers, *Subtle Bodies: Representing Angels in Byzantium* (Berkeley and Los Angeles: University of California Press, 2001), pp. 97-99.

[20] For *ekphrasis* as a rhetorical device and not a literary genre, see the recent book by Ruth Webb which encapsulates her past research on *ekphrasis*; Webb, *Ekphrasis, Imagination and Persuasion in Ancient Rhetorical Theory and Practice* (Farnham: Ashgate Publishing Limited, 2009).

experience of church buildings as a sacred space imbued with spiritual content. The texts were viewed as a possible vehicle for assisting the faithful towards their union with God.[21]

Where the purpose of these texts is thought to foster a spiritual contemplation of God, or divine *theoria* (θεωρία) through the contemplation of church buildings, some scholars ascribe them to the genre of 'architectural *theoria*.' This phrase was first used by Kathleen McVey in her attempt to pinpoint the stylistic and conceptual specificity of a sixth-century Syriac inauguration hymn, in which architectural features were presented as having a cosmological or theological significance.[22] McVey considered that the inauguration hymns that belong to 'architectural *theoria*' resembled the Late Byzantine *mystagogical commentaries on liturgy,* and therefore differed from the *ekphraseis* of church buildings.[23] The resemblance is grounded in the biblical interpretative model leading to the divine *theoria,* whereas *ekphraseis* focus on the vivid description of a church building. However, there is hardly any Byzantine *ekphrasis* of an edifice that brings the architectural object vividly before the eyes of an audience without engaging it in a process of visualisation, imagination and interpretation of the object described.[24] In this process of representation, the mind is led into the realm of the intellect and, sometimes, of the spirit. An *ekphrasis* of a church building can achieve the same effect as any text that supports an allegorical interpretation and analogical justification of church buildings.

From the collection of Byzantine texts, irrespective of genre, the descriptions of the church of Hagia Sophia and hymns composed for its dedication in the sixth century make up the largest extant body of evidence for any church building ever built in Byzantium. As an imperial and patriarchal church built by Justinian during 532-537 and restored between 558 and 562, the Great Church has been held in high regard

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[21] For Byzantine *ekphraseis,* see James and Webb, '"To Understand Ultimate Things"', pp. 1-17. For *ekphraseis* of church buildings, see Webb, 'The Aesthetics of Sacred Space: Narrative, Metaphor, and Motion in 'Ekphraseis' of Church Buildings', *DOP,* 53 (1999), pp. 59-74.

[22] Kathleen McVey, 'The Domed Church as Microcosms: Literary Roots of an Architectural Symbol', *DOP,* 37 (1983), pp. 91-121, esp. p. 91, and McVey, 'The *Sogitha* on the Church of Edessa in the context of Other Early Greek and Syriac Hymns for the Consecration of Church Buildings', *ARAM,* 5 (1993), pp. 437-463.

[23] McVey, 'The Domed Church', p. 91.

[24] For the *ekphrasis* as a perfect 'architectural *theoria*', see Ruth Macridis and Paul Magdalino, 'The Architecture of *Ekphrasis*: Construction and Context of Paul the Silentiary's *Ekphrasis* of Hagia Sophia', *BMGS,* 12 (1988), pp. 47-82; for imagination and persuasion in *ekphrasis,* see Webb, *Ekphrasis, Imagination and Persuasion,* pp. 107-130.

since its erection.[25] The history of its reception can be recovered through a variety of texts, especially architectural descriptions and liturgical sources. More specifically, from the first half of the sixth century, four texts give valuable insights into the history of Hagia Sophia's reception as they recount the church's first rebuilding in 532-537, the dome's redesign in 558-562, and the second dedication of the church in 562. These are: Procopius of Caesarea's account of the first Justinianic church, St. Romanos the Melode's *kontakion* 'On Earthquakes and Fires', Paul the Silentiary's *Ekphrasis* of the second Justinianic church and the inauguration hymn composed by an anonymous hand for the second dedication.[26]

Byzantine responses to the sixth-century Hagia Sophia can be corroborated with the spatial experience of the church, as the building is still extant. This spatial experience can still be felt even though the interior space is deprived of its original liturgical furnishing and heavily altered by functional changes over time. Thus, the

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[25] There is a vast range of sources on the architectural history of Hagia Sophia. A selection includes: William R. Lethaby and Harold Swainson, *The Church of Sancta Sophia, Constantinople: a Study of Byzantine Building* (London-New York: Macmillan & Co., 1894); Eugènios M. Antoniades, *Ekphrasis tês Hagias Sophias,* 3 vols (Athens: P.D. Sakellariou, 1907-1909, repr. 1983); Alfons M. Schneider, *Die Hagia Sophia zu Konstantinopel* (Berlin: Gebr Mann, 1939); Emerson H. Swift, *Hagia Sophia* (New York: Columbia University Press, 1940); Heinz Kähler, *Hagia Sophia*-with a chapter on the mosaics by Cyril Mango, trans. by Ellyn Childs (London: A. Zwemmer Ltd Publishers, 1967); Raymond Janin, *La Géographie ecclésiastique de l'Empire byzantine tome III Les Eglise et les monasteries,* 2nd edn (Paris: Institut français s'études byzantines, 1969), pp. 455-470; Wolfgang Müller-Wiener, *Buildlexikon zur Topographie Istanbuls* (Tübingen:Verlang Ernst Wasmuth, 1977), pp. 84-96; Eugene Kleinbauer, *Saint Sophia at Constantinople: Singulariter in Mundo* (Dublin, New Hampshire: William L. Bauhan Publisher, 1999); Richard Krautheimer, *Early Christian and Byzantine Architecture,* 4nd edn (Yale: Yale University Press, 2002), pp. 205-236; Thomas. F. Mathews, *The Early Churches of Constantinople: Architecture and Liturgy* (University Park and London: The Pennsylvania State University Press, 1971); Rowland Mainstone, *Hagia Sophia: Architecture, Structure and Liturgy of Justinian's Great Church* (London: Thames and Hudson, 1988); Robert Mark and Ahmed Çakmak (eds.), *The Hagia Sophia: from the Age of Justinian to the Present* (Cambridge, MA: Cambridge University Press, 1993); for a photographic survey of Hagia Sophia, see Mango and Ahmed Ertuğ (photographer), *Hagia Sophia: A Vision for Empires*, ([Istanbul]: Ertuğ & Kocabiyik, 1997).

[26] Procopius of Caesarea, *Buildings* I.i.21-78, Greek text and English trans. by H. B. Dewing, [Loeb edn] (Cambridge Massachusetts: Harvard University Press and London: Hutchinson 1961), pp. 11-33; Romanos the Melode, Kontakion 54: 'On Earthquake and Fires', Greek text in *Sancta Romani Melodi Cantica: Cantica Genuina* ed. by Paul Mass and Constantine A. Trypanis, (Oxford: Clarendon Press, 1963), pp. 462-471, English trans. by R. Joe Schork in *Sacred Song from the Byzantine Pulpit: Romanos the Melodist,* Gainesville, FL: University Press of Florida, 1995), pp. 184-195. The standard Greek edition of Paul the Silentiary' *Ekphrasis of Hagia Sophia* is Paul Friendländer, *Johannes von Gaza und Paulus Silentiarius* - Kunstbeschreihungen Justinianischer Zeit (Leipzig-Berlin: Verlage von B.G. Teubuer, 1912), pp. 227-256; partial English trans. (lines 1-354 and 921-1030) by Peter N. Bell in *Three Political Voices from the Age of Justinian. Agapetus, Advice to the Emperor: Dialogue on Political Science; Paul the Silentiary, Description of Hagia Sophia* (Liverpool: Liverpool University Press, 2009), pp. 189-212, while lines 355-920 trans. by Cyril Mango, *The Art of the Byzantine Empire 321-1453* (Toronto: University of Toronto Press, 1972), pp. 80-91. *Inauguration Anthem,* ed. by C.A. Trypanis, in *Fourteen Early Byzantine Cantica* (Wien: Böhlau in Kommission, 1968), pp. 141-147, English trans. by Andrew Palmer, 'The inauguration Anthem of Hagia Sophia in Edessa: A New Edition and Translation with Historical and Architectural Notes and a Comparison with a Contemporary Constantinopolitan Kontakion', *BMGS,* 12 (1988), pp. 140-144.

wealth of sixth-century evidence, both textual and architectural, puts Hagia Sophia on the map as a germane case study.

However, in spite of the supporting textual evidence, Hagia Sophia presents certain limitations as an architectural object because of its unique design and grand scale. The Great Church is one of many examples of early Byzantine architecture, albeit extraordinary, but it is not the most representative example of a Byzantine church building type *par excellence*. Its design had inherent contradictions, such as radical innovation alongside basic conservatism, which hardly recommends it as a typical Byzantine church. The inscribed cross church type seems be the achievement of Early Byzantine architecture, if not of the entire body of Byzantine architecture, as some scholars have rightly argued.[27] Regarding its architectural influences, the design of Hagia Sophia stands out as *singulariter in mundo* in relation to its architectural predecessors.[28] When considering its successors, Hagia Sophia's influence on Late and Post-Byzantine architecture seems to have been rather small. Its real influence on Christian architecture can only be traced to the nineteenth century, and particularly in the West.[29]

In addition, the grand scale of the monument has somehow distorted the discussion on Hagia Sophia as the paragon of Byzantine architecture, both technologically and architecturally. When undertaking an architectural analysis of Hagia Sophia, phrases like 'the acknowledged paradigm of the East Christian of Byzantine style' have been used seemingly without further need for explanation.[30] It is worth stressing that the architectural experience within Hagia Sophia is unequalled and unrepeatable, since the spatial impact is largely the result of the overpowering scale, proportions, and decorations and, only to a lesser extent, the result of its layout. Hagia Sophia represents indeed the supreme achievement of Byzantine technology, but its architectural value should be discussed in terms of its uniqueness and not of its shared common features. Therefore, Hagia Sophia can be taken neither as the

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[27] Hans Buchwald, 'Saint Sophia, Turning Point in the Development of Byzantine Architecture?' in *Die Hagia Sophia in Istanbul,* pp. 29-58, repr. in *Form, Style and Meaning in Byzantine Church Architecture* [Variorum Collected Studies Series] (Aldershot: Ashgate Variorum, 1999).

[28] Eugene Kleinbauer, *Saint Sophia at Constantinople: Singulariter in Mundo* (Dublin, New Hampshire: William L. Bauhan Publisher, 1999), pp. 68-69.

[29] Anthony Cutler, 'The Tyranny of Hagia Sophia: Notes on Greek Orthodox Church Design in the United States', *JSAH,* 31 (1972), pp. 38-50. For Hagia Sophia's influence on the Ottoman mosque architecture, see Metin Ahunbay and Zeynep Ahunbay, 'Structural influence of Hagia Sophia on Ottoman architecture', in *Hagia Sophia from the Age of Justinian to the Present,* ed. by Mark and Çakmak, pp. 179-194.

[30] William MacDonald, 'Design and Technology in Hagia Sophia', *Perspecta* 4 (1957), pp. 20-27.

universalising experience of Byzantine church architecture, nor of the sixth century alone. Unquestionably, this church offers a very distinctive architectural experience, and this raises the question of how much generalisation an architecturally idiosyncratic case can allow. The answer is not to be found in the architecture of the church itself, but in the way the Great Church was used for the most basic utilitarian function: liturgical rituals.

There is a general consensus among the liturgists that the Great Church played an important role in the development of the Liturgy in Byzantium, to the extent that the Byzantine Liturgy is, in fact, the Liturgy performed in Hagia Sophia.[31] As I shall now go on to argue, it is the liturgical space of Hagia Sophia and the evolution of the Byzantine Liturgy shaped by Hagia Sophia that suggest the church as a strong case study. It must be said that the Byzantine Liturgy is the result of an ongoing process of accommodating processions, chants, prayers, and doctrinal issues. While the initial synthesis of the Byzantine Liturgy needed nearly seven hundred years of transformation and adaptation (from the fourth to the eleventh century), it was the sixth-century church of Hagia Sophia that contributed chiefly to affording the Byzantine Liturgy its unique character.[32] The inter-dependency of the Byzantine Liturgy and Hagia Sophia works, however, in both directions. On the one hand, scholars have unanimously agreed that the ritual pattern of the Liturgy was shaped by the architectural layout of the Great Church.[33] Robert Taft has gone so far as to say that 'knowledge of the layout of this church (i.e., Hagia Sophia) is absolutely essential for any understanding of the ritual of the Byzantine mass.'[34] On the other hand, Hagia Sophia's architecture was regarded as conspicuously exhibiting the symbolic understanding of the Liturgy formulated in the sixth century.[35] This edifice, with its spectacular interior space covered by a dome, enhanced the meaning of the Liturgy as a

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[31] Robert F. Taft, 'How Liturgies Grow: The Evolution of the Byzantine 'Divine Liturgy' *OCP,* 43 (1977), pp. 355-378; Robert F. Taft, *The Byzantine Rite: A Short History* (Collegeville, Minnesota: The Liturgical Press, 1996), pp. 28-41.

[32] Taft, 'How Liturgies Grow', p. 358.

[33] Mathews, *Early Churches of Constantinople,* p. 7. For the general pattern of the ritual of the Great Entrance in Hagia Sophia, see Taft, *The Great Entrance. A History of the Liturgy of St. John Chrysostom*, [OCA 200] (Rome: Pont. Institutum Orientalium Studiorum, 1978), esp. p. 178-213.

[34] Taft, *Great Entrance,* p. 180.

[35] Hans-Joachim Schulz, *The Byzantine Liturgy,* trans. by Matthew J. O'Connell (New York: Pueblo Publishing Company, 1986), p. 32; Taft, *Byzantine Rite,* p. 36.

cosmic ritual that brought heaven and earth together.[36] Subsequently, the ritual which was able to find an ideal architectural reflection in Hagia Sophia has been enacted in all Byzantine and Post-Byzantine churches, regardless of their building type and scale.[37]

To conclude, both the rich textual evidence and the major developmental stage of the Byzantine Liturgy make Hagia Sophia an ideal case study for any investigation into the symbolic understanding of churches, and the role played by these sacred spaces in the lives of the Byzantines. Although the architecture of Hagia Sophia was never exactly replicated in late Byzantium, the Great Church acted as a normative centre with regards to ecclesiastical matters, including liturgical planning and its symbolic theology.[38] As a result, any church with a dome, or a dome on a drum placed in the nave, thereby actualised the cosmological symbolism of the Liturgy, and of church buildings.[39] Despite its architectural idiosyncrasy, I contend that Hagia Sophia remains the best example through which to gain a better understanding of what a church building represented in Byzantium, and to envisage Byzantine approaches to church buildings at both the physical and symbolical level in the sixth century.

3. Byzantine Church Architecture as a Prop for Religious Experience – Literature Review

The aim of this section is twofold. Its main purpose is to place my research in a wider context and to show how it relates to, and departs from, the existing work on the spiritual dimension of church architecture in general, and of Byzantine church architecture in particular. The section also describes my own methodological framework, and is designed to take into consideration the particulars of the Byzantine sources.

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[36] Kallistos (of Dioklea) Ware, 'The Meaning of the Divine Liturgy for the Byzantine Worshipper', in *Church and People in Byzantium: 20th Spring Symposium of Byzantine Studies-Manchester, 1986,* ed. by Rosemary Morris (Birmingham: University of Birmingham, 1990), p. 7-28, esp. pp. 8-15.

[37] Taft, *Byzantine Rite,* p. 36, Schulz, *Byzantine Liturgy,* p. 44, also note 9, p. 215. Hagia Sophia's allure has been so great that scholars saw the Liturgy of Hagia Sophia reflected in nearly all Byzantine liturgical commentaries. See, for instance, the debate on St. Maximus the Confessor's *Mystagogy* and Hagia Sophia: Nicolas Ozoline, 'La symbolique cosmique du temple chrétien selon la Mystagogie de Saint Maxime le Confesseur', in *Mystagogie : pensée liturgique d'aujourd'hui et liturgie ancienne. Conférences Saint-Serge 39, Paris, 1992,* ed. by Andronikof M. Triacca and Achille Pistoia (Rome: CLV-Edizioni Liturgiche, 1993), pp. 253-254.

[38] Mathews, *Early Churches of Constantinople,* p. 77.

[39] The general argument is that any circular shape or form assumes a heavenly significance regardless of its position in the building, be it an apse or a dome in the nave; see, Louis Hautecœur, *Mystique et Architecture: symbolisme du cercle et de la coupole* (Paris: A. et J. Picard, 1954), p, 214 and ch. 3, 'La Coupole celeste', pp. 61-75.

Previous scholarship has shown avenues for addressing the role played by church architecture in shaping religious experience. Thus far, church architecture as a prop for religious experience has been addressed as an issue in itself, or as a direct consequence of the experience associated with the sacred. Most books on church architecture discuss the spiritual dimension of church design, the symbolism of churches and church architecture as a kind of theology manifested in stone or as a form of worship.[40] However, no book or article has investigated how Byzantine church spaces could act as experientially transformative spaces germane to a spiritual ascent, or how mental images of Byzantine buildings could aid the contemplative process.[41] In the light of all this, crucial to my project's success is to find the appropriate criteria for evaluating previous research in order to establish an appropriate methodology pertaining to the Byzantine material. As an architect, I could not help noticing that the way the concept of architectural function has been generally understood becomes crucial in the evaluation and interpretation of church buildings.

Most scholars dealing with this subject have preferred to distinguish between the different layers of architectural function, and to identify one which exclusively addressed and fulfilled people's spiritual needs. For instance, Sible de Blaauw distinguished three main levels of analysis when he surveyed the literature on the interplay between architecture and liturgy in Late Antiquity and the Middle Ages.[42] He suggested that the first level of analysis should deal with the context in which the liturgical event was historically situated. The second level needed to discuss the functional aspect of church buildings, in which various parts of the building were seen as having been specifically created to accommodate particular rituals. At the third (spiritual or abstract) level, both architecture and liturgy were seen as expressions of certain beliefs. By describing this third level as having political and social values, he

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[40] The bibliography is enormous, but for books relevant to the topic that have been published since I started my research programme, see Jeanne Halgren Kilde, *Sacred Power, Sacred Space: An Introduction to Christian Architecture and Worship* (Oxford: Oxford University Press, 2008); Allan Doig, *Liturgy and Architecture: From the Early Church to the Middle Ages* (Aldershot-Burlighton: Ashgate, 2008); Sigurd Bergmann (ed.), *Theology in Built Environments: Exploring Religion, Architecture, and Design* (New Brunswick-New Jersey: Transaction Publishers, 2009); Slobodan Ćurčić and Evangelia Hadjitryphonos (eds.), *Architecture as Icon: Perception and Representation of Architecture in Byzantine Art* (New Haven and London: Princeton University Art Museum, 2010).

[41] For Graeco-Roman culture, see Jaś Elsner, *Art and the Roman Viewer: Transformation of Art from Pagan World to Christianity* (Cambridge: Cambridge University Press, 1995), esp. ch. 3, 'Viewing and the Sacred: Pagan, Christianity and the Vision of God', pp. 88-124; for Medieval Western architecture, see Mary Carruthers, *The Craft of Thought: Meditation, Rhetoric, and the Making of Images, 400-1200* (Cambridge: Cambridge University Press, 1998), esp. ch. 5, 'The Place of the Tabernacle', pp. 221-276.

[42] Sible de Blaauw, 'Architecture and Liturgy in Late Antiquity and the Middle Ages', *ALw*, 33 (1991), pp. 1-43, esp. p. 32.

claimed that church buildings met people's spiritual needs, because buildings are expressions of social and political concepts.

De Blaauw's point of discrimination between these three layers makes the research on church buildings easier. Yet his approach ignores the fact that the architectural design of churches is directed towards an ultimate purpose, which goes beyond utility itself and in which the aesthetic delight or expressive content are never ends in themselves but rather serve to assure the function of the building as a whole.[43] A religious structure works when all levels contribute to the fulfilment of people's material and spiritual needs. It is within such an understanding of the architectural function that Vitruvius' classical categories of good architecture – structure/firmness (*firmitas*), utility/commodity (*utilitas*), and delight/beauty (*venustas*) – were thought to work together.[44] Utility, beauty and structure represent areas which satisfy the material and spiritual needs, but they do not achieve an ultimate purpose separately. There is a human orientation inherent in the design, which although subject to individuals' evaluation and appreciation, responds to basic human needs and fulfils expectations, which the architectural function tries to encapsulate.[45]

De Blaauw is not the only scholar who has identified just one level through which the spiritual urges of the faithful could be addressed and satisfied. Most scholars have identified only one level; the difference between their approaches resides in the contention regarding how and why church architecture is a source of religious experience. Nils Holm, for instance, addressed the issue from the perspective of the psychology of religion in order to see why religious experience has been associated with sacred architecture.[46] He argued that religious experience was generated through a process of appropriation and internalisation of a given religious tradition. As a result, the essential parameters for a religious experience are the individual's own experiences and those of others in a specific tradition. These experiences are preserved either in what he called the 'inner existence space' of the individual, or in the symbolic system

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[43] Larry L. Ligo, *The Concept of Function in Twentieth-Century Architectural Criticism* (Ann Arbor-Michigan: UMI Research Press, 1984).

[44] Vitruvius, *On Architecture* I.iii.3: 'Haec autem ita fiery debent, ut habeatur ratio firmitatis, utilitatis, venustatis', Latin text and English trans. by Frank Granger [Loeb edn] (Cambridge Mass: Harvard University Press, 1962), p. 34-35.

[45] More recent studies have started regarding the experience of architecture as the foundation of architectural function; see Jon Lang and Walter Moleski, *Functionalism Revisited: Architectural Theory and Practice and the Behavioral Science* (Farnham: Ashgate Publishing Limited, 2010), pp. 39-62.

[46] Nils Holm, 'Religious Architecture and Religious Experience', in *'Being Religious and Living through the Eyes': Studies in Religious Iconography and Iconology. A Celebratory Publication in Honour of Professor Jan Bergman,* ed. by Peter Schalk (Uppsala: Uppsala University, 1988), pp. 205-213.

shaped by former generations, that is to say liturgical traditions. Religious experience is activated when these two aspects converge.

Holm claimed that church architecture plays an important role in mediating this encounter through its design, thereby addressing 'the innermost psychological structures of mankind's inner existence space.'[47] He constructed his argument by questioning how the experience shaped by sacred spaces might be examined. For this purpose, he drew on architectural patterns found in three differentiated liturgical traditions within Protestantism. His exploration was, however, reduced to pointing out how various spatial organisations strengthened the specific ways of worshipping, which most likely corresponded to structures in the 'inner existence space.' Holm's answer to the question of how church architecture is a source of religious experience was rooted in the utilitarian functioning of buildings. He contended that, by using liturgical layouts intended to support specific types of worship, the individual's own experiences are enriched. It must be noted that Holm's argument did not take into account the fact that church architecture fulfils its function on various levels, beyond the utilitarian, such as the symbolic and the expressive. Though the utilitarian functioning of church architecture does support a religious experience by offering a space for the individual's experiences to meet with others' experiences, codified symbolically in liturgical rituals, this represents only one level of enquiry.

A different approach was taken by Andrzej Piotrowski, who has attempted to frame a theory regarding the representational functioning of church architecture by stressing the importance of the symbolic dimension of church buildings.[48] He claimed that Byzantine church buildings functioned as symbolic realities. This functioning could provide at the same time the basis for a religious experience. However, while he devoted much space to proving the symbolic dimension of church architecture by means of theological texts and two architectural case studies, he said little about the ways in which church architecture could induce a religious experience. In this regard, his argument does not go beyond the basic supposition that a building, by simply housing people and activities, accommodates an experience. Nevertheless, it is noteworthy that Piotrowski viewed the religious experiences offered within a church building as depending heavily on the symbolic functioning of the architecture.

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[47] Holm, 'Religious Architecture', p. 208.

[48] Andrzej Piotrowski, 'Architecture and the Iconoclastic Controversy', in *Medieval Practices of Space*, ed. by Barbara A. Hanawalt and Michal Kobialka (Minneapolis: University of Minnesota, 2000), pp. 101-127. A revised argument can be found in Andrzej Piotrowski, *Architecture of Thought* (Minneapolis: University of Minnesota Press, 2011), esp. ch. 1, 'Architecture and Medieval Modalities of Thought', pp. 1-32.

An alternative view was taken by Richard Kieckhefer, who tangentially addressed the issue of the spiritual consequences of church design in his effort to articulate a consistent approach to the use of, and responses to, the building.[49] His primary aim was to approach church architecture in terms of its utilitarian, aesthetic and symbolic functioning as a whole. Aware of its multilayered purposes, he questioned how church architecture had been used, and what kind of experiences a believer might have undergone on entering a church. He embraced a phenomenological approach to church buildings and argued throughout his study that how a church was regarded depended on the way it was used and how people became receptive to and familiar to this experience as part of their response to churches.

In the chapter dedicated to the study of the aesthetic impact, Kieckhefer argued that the expressive functioning of church architecture represented an important factor in understanding the responses to buildings.[50] He described this factor as the one that 'impresses itself most forcefully at once at entry.' Notwithstanding its degree of explicitnesses or elaborateness, the expressive-aesthetic functioning of a church can offer the spatial setting for a human-divine encounter. According to Kieckhefer, it was at this level that church architecture was able to generate a first-hand religious experience. Drawing on the church of Hagia Sophia in Constantinople, he argued that its design suggested the interplay between transcendence and immanence *par excellence*. Through the properties of height, light and acoustics of Hagia Sophia people participated in a different reality, which was mysterious and timeless. He used Byzantine textual evidence to argue that Eastern Christians perceived the church building as imbued with a sense of transcendence. In stressing the interplay between human transcendence and divine immanence within a church building, he placed the source of religious experience within the aesthetic functioning of the building.[51] This argument must be understood in view of the distinction made between the expressive-aesthetic experience and the symbolic functioning of a church building. It can be argued that Kieckhefer fails to examine what church buildings might achieve when people find their needs fulfilled at both the expressive aesthetic and symbolic levels.

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[49] Richard Kieckhefer, *Theology in Stone: Church Architecture from Byzantium to Berkeley* (Oxford: Oxford University Press, 2004), esp. pp. 21-166.
[50] Kieckhefer, *Theology in Stone*, pp. 97-133.
[51] Ibid., p. 119.

The scholar who has most comprehensively dealt with the issue of sacred architecture as a prop for religious experience is Lindsay Jones.[52] In a two-volume work designed to set out general hermeneutical principles of sacred architecture, he provided an integrated framework to analyse representative religious structures belonging to various religions. Church architecture was one of the religious structures considered. He claimed that religious buildings characterise, in a nutshell, the religious experience of humankind, as they are essentially well thought-out settings for rituals. According to Jones, sacred architecture functions as *orientation*, *commemoration* and *ritual context*. Within this classification, he scrutinised how broad distinctive architectural and ritual circumstances, eleven in total, supported the complex functioning of sacred architecture.

Throughout the chapter 'Contemplation: Props for Devotion', Jones made a clear-cut distinction between the ways in which sacred architecture can support religious experience. For him, sacred architecture provides indirectly the *locus* for the ritual act, and consequently, it offers the possibility that the experience might happen. Architectural configurations mediate contiguously a link between participants and the divine during rituals.[53] Although Jones linked religious experience to the utilitarian functioning of architecture, he asserted that the ritual context was nuanced by various elements characteristic of the aesthetic and symbolic functioning of architecture. Either as an object of concentration in itself or as a space inducing or supporting a meditative attitude, sacred architecture is a catalyst for religious experience. He made the categorical statement that contemplation was 'the direct and purposeful experience of architecture.'[54] He exemplified how this aspect was experienced in different religions, namely Buddhism, Judaism, Islam, and Christianity, while providing cross-cultural parallels from across the world.

Jones ended his work with an appendix aimed at cataloguing all possible avenues or 'priorities' for studying the manifold functioning of church architecture.[55] In the category dedicated to contemplation, Jones detailed two 'priorities': architectural 'foci' of contemplation and contemplative 'modes' for the presentation and

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[52]Lindsay Jones, *The Hermeneutics of Sacred Architecture: Experience, Interpretation, Comparison*, Vol. 1: *Monumental Occasions: Reflections on the Eventfulness of Religious Architecture,* Vol. 2: *Hermeneutical Calisthenics: A Morphology of Ritual-Architectural Priorities* (Cambridge, Mass: Harvard University Press, 2000).
[53] Jones, *Hermeneutics,* vol. 2, pp. 213-236.
[54] Ibid., p. 214.
[55] Ibid., pp. 295-332.

apprehension of meanings and messages.[56] He considered that doorways, vaults or ceilings, decorations, windows, sculptures, icons, facades and light were architectural 'foci' for contemplation because they could serve as material springboards for spiritual ascent and meditation. These are in fact architectural features that work as individual catalysts regardless of the rest of the church and I have discussed how Abbot Suger noticed their transformative power upon the human mind. In contrast to individual elements, the contemplative 'modes' refer to configurations, collections of objects that placed the beholder in a process of self-actualisation and self-transcendence, and in relation to the divine. Jones's examples of contemplative 'modes' included the face-to-face consultation of anthropomorphic gods in Greek oracle temples, and the history of Christian salvation in stained-glass windows.

Notwithstanding this finely-drawn clarification, Jones's point on what he terms 'architecture-assisted contemplation' is rather undeveloped in the sections devoted to the Christian tradition and church architecture. He has simply reviewed the debate on the appropriateness of artistic means for the spiritual ascent of humankind towards its Creator, initiated by Early Christian writers, and has focused on Suger's writings and his St.-Denis cathedral as a case study.[57] Byzantine sacred architecture has been neglected altogether. Therefore, my thesis aims to fill the gap existing in Jones's work, as I wish to show that the understanding of the manifold functioning of church architecture increases when Byzantine church architecture and its texts are considered equally. Furthermore, in spite of Jones's rigorous methods for quantifying the potential of sacred architecture, the question of how one can study the catalytic potential of church architecture remains to be detailed. In what follows, I will appraise all the approaches mentioned above with the aim of examining their strengths and applicability to the Byzantine material in order to define my own concepts and methodology.

4. Analytical framework –'Archi-texts' for Contemplation

Much of the work reviewed here either has touched on or has dealt directly with Byzantine church architecture. However, the approaches are somewhat ambivalent from a methodological point of view. Scholars have supported their

[56] Ibid., pp. 318-323.
[57] Ibid., pp. 227-229.

arguments by means of textual evidence and, in some instances, by drawing on architectural case studies. Piotrowski attempted to combine the two, but his examples lack correspondence between texts about buildings and the buildings themselves. He linked Middle Byzantine church architecture to Late Antique texts such as Pseudo-Dionysius' corpus of writings. However, he failed to question the actual reception and place of Pseudo-Dionysius in Byzantine thought and popular religion, when he contended that 'the Dionysian ideas were integral to the architectural modality of symbolic thought in Byzantium.'[58] Kieckhefer, on the other hand, placed textual evidence alongside architectural material to illustrate Hagia Sophia as the epitome of transcendence-in-immanence. However, when investigating the symbolic narrative of churches, Kieckhefer polarised the discussion, claiming that liturgical texts in which churches were theologically interpreted did not reach a wider audience; they were in fact the privilege of only a few, mostly learned scholars or clergy.[59] Thus, he diminished the relevance of the theological understanding of church spaces as catalysts for religious experience because of the limited reception of this understanding. In contrast, Jones looked more broadly at church architecture by focusing on both individual and/or a collection of architectural features from a range of religions that can assist the contemplation of the divine. Yet, he considered entire architectural configurations or spatial layouts of church buildings in terms of a sustained religious experience in Christianity.[60] Nor did he question whether what was physically and emotionally experienced inside sacred structures could be considered as a religious experience.

One important aspect that needs clarification before going any further is how meaning is attached to objects and conveyed, and how interpretations given in a period of time to churches are to be examined.[61] In architectural and urban studies, Amos Rapoport's model of levels of meaning in the built environment is the one most widely

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[58] Piotrowski, *Architecture of Thought,* p. 31. For Pseudo-Dionysius' reception in Byzantium, see Andrew Louth, 'The Reception of Dionysius up to Maximus the Confessor, *Modern Theology,* 24 (2008), pp. 573-583, and Louth, 'The Reception of Dionysius in the Byzantine World: Maximus to Palamas', *Modern Theology,* 24 (2008), pp. 585-599.

[59] Kieckhefer, *Theology in Stone,* p. 140.

[60] The only structures considered by Jones in their wholeness were the Buddhist temples and Mayan 'earth monster' temples.

[61] This topic has been hotly debated in art history scholarship. For the architectural form as carrying the meaning, see Richard Krautheimer, 'Introduction to an 'Iconography of Medieval Architecture',' *JWarb,* 5 (1942), pp. 1-33. This point has been challenged, see, for the shift, Nelson Goodman, 'How Buildings Mean', *Crit Inquiry,* 11 (1985), pp. 642-653, William Whyte, 'How Do Buildings mean? Some Issues of Interpretation in History of Architecture', *Hist Theory,* 45 (2006), pp. 153-177.

used today.[62] Rapoport identified three levels of meaning. The first is high-level meaning, which relates to cosmological and otherworldly symbolism that might be fixed in buildings, such as buildings as terrestrial copies of the heavenly ones. The second is middle-level meaning, which negotiates the intentional messages about identity and status evoked by the designers and constructors, such as the emperor or deities as the builders of the world. The third is low-level meaning, which refers to the ways in which buildings can direct and interact with people, influencing movement in space and types of behaviour. These levels of meaning in the built environment are not autonomous or reciprocally exclusive, and as a general rule, distinct buildings express meanings on at least two levels.

Rapoport's model of three-level-meaning cannot be employed in its entirety when studying sixth-century Byzantine architecture. One problem is that there are no texts deliberately revealing the intended messages of the designers or constructors of churches and, so, an analysis of the middle-level meaning cannot be undertaken. However, the low-level of meaning holds great importance because it is centred on the idea that architectural meaning emerges from the interaction between architectural objects or settings and people. This line of thought was also pursued by Jones, who favoured interpretations and multiple meanings to 'the supposed once-and-for-all meanings of buildings.'[63] He claimed that the original meaning, that is, the presumed explicit agenda promulgated by the initial designers, can no longer constitute the real meaning, because even if the original meaning is deduced, the original intention has been surpassed by the interaction between people and the buildings during rituals. Therefore, Jones placed the source of architectural meanings within an interactive relationship, that takes into account both buildings and users, an interplay called the *ritual-architectural event*.[64] This means that meanings reside neither in the building itself, nor in the mind of the human subject. The meanings emerge from an interplay between buildings and human subjects, with both participants taking an equal part in the process In this process, specific meanings make sense to people at a certain time in an

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[62] Amos Rapoport, 'Levels of Meaning in the Built Environment', in *Cross-Cultural Perspectives in Non Verbal Communication*, ed. by Fernando Poyatos (Toronto: C. J. Hogrefe, 1988), pp. 317-336 and Rapoport, *The Meaning of the Built Environment: A Nonverbal Communication Approach* (Beverly Hills-New Delhi: Sage Publications, 1982), esp. pp. 57-72.

[63] Jones, *Hermeneutics*, vol. 1, p. 28. Practicing architects and theorists share the same point of view, although they have different approaches to how meanings of buildings are constructed. See, for instance, example, Bernard Tschumi, *Architecture and Disjunction* (Cambridge, Massachusetts: MIT Press, 1996), p. 19.

[64] Jones, *Hermeneutics*, vol. 1, p. 45.

explicit place.[65] Accordingly, meanings of church buildings have their own dynamics and no interpretation of their meanings is absolute, apart from in terms of the aspect of their place in time. In light of this, a sound working method should start with a thorough analysis of interpretations of churches in a given period. However, an in-depth analysis of responses to churches requires placing them alongside the archaeological and architectural evidence. I offer for consideration the premise that when interpretations of churches are read against the extant architectural configurations, a greater understanding of why certain responses to church buildings came into focus is gained.

Jones's concept of the *ritual-architectural event* as the foundation for shaping responses to churches seems to work well in the Byzantine context. It better links the design of domed basilicas with the symbolic understanding of the Eucharistic ritual, and the cosmological interpretation of church buildings in the sixth century. Jones's suggestion of examining the complex architectural configurations that have the potential either to sustain a symbolic vision of church or to act as spiritual 'foci' is also applicable to the Byzantine material. However, as I shall now go on to argue, it is crucial to examine these configurations not only in isolation, but also in the light of both extant architectural objects and their interpretations in a given period. Placing the descriptions and interpretations of churches within the buildings themselves is not enough. It is of great importance to look for textual evidence pertaining to the experience of churches in a given period, which can be contextualised within the broader spatial experience of extant buildings. I use the original term 'archi-text' to refer to this inter-dependence between the architectural object (in a given period and in the present), its interpretations (in a given period) and its spatial or architectural experiences (in a given period and in the present).

My concept places great emphasis on the texts about buildings, and as a result, I will take the *ekphraseis* of Hagia Sophia at face value in terms of the experience conveyed and not as archaeological evidence. My approach is based on the assumption that the texts were written as vivid accounts and their authors were concerned with the function of *ekphrasis* as a way to create an experience of the building viewed and to make clear truths about the functioning of a church. Yet I am aware that rhetoric and

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[65] Kieckhefer, *Theology in Stone,* p. 11; also, for the point that meaning is not an intrinsic property of the architectural form see, Ralf Weber, *On the Aesthetics of Architecture: A Psychological Approach to the Structure and the Order of Perceived Architectural Space* (Aldershot: Ashgate, 1995), pp. 27-36.

imperial propaganda during Justinian's time could have coloured the *ekphraseis* of the church and the liturgical texts with political values. No doubt, the church of Hagia Sophia may have been used by sixth-century Byzantines to make ideologically driven claims that God had chosen and loved to live amongst them. This is part of the process of attributing power to a building whose sacredness has also been socially constructed, and politically used. However, since there is no way to find out whether the Byzantines in the sixth century preferred a political reading to a spiritual one and since the recent scholarship has dealt with the imperial propaganda, the political aspects of such texts will be minimal in this thesis.[66] Instead, I will focus on what users spatially experienced in the church and I will contextualise their experiences within its extant spatial setting. Because the emphasis is on the experience of being in the church, I analyse the general impact of Hagia Sophia's design without first questioning the objectivity of Byzantine claims, ideological or otherwise, and responses to the church layout.

With this approach, my aim is to move the study of *ekphraseis* of Hagia Sophia into the area of perceptual knowledge.[67] Looking at how accounts of the experience of the Great Church fitted into the actual spatial experience of the building will take me closer to the actual sixth-century experience of Hagia Sophia. This type of analysis, centred on how buildings were experienced, not only visually but also spatially, is much better positioned to offer insights into how sacred spaces were represented. Because spatial references and perceptual metaphors permeate accounts of religious experience, this discussion will enable me consecutively to identify the 'archi-texts' for

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[66] For a political reading of Procopius' texts, see Anthony Kaldellis, *Procopius of Caesarea: Tyranny, History, and Philosophy at the End of Antiquity* (Philadelphia: University of Pennsylvania Press, 2004); of Romanos the Melode, see Johannes Koder, 'Imperial Propaganda in the Kontakia of Romanos the Melode', *DOP,* 62 (2008), pp. 275-291; in general about rhetoric and architecture in Byzantium with a focus on the sixth century, see Robert Ousterhout, 'New Temples and New Solomons: The Rhetoric of Byzantine Architecture' in *Old Testament in Byzantium,* ed. by Paul Magdalino and Rober Nelson (Washington, D.C.: Dumbarton Oaks Research Library and Collection; Distributed by Harvard University Press, 2010) pp. 223-253.

[67] Perceptual knowledge is the type of knowledge about things that is facilitated by looking at objects, feeling, touching or all together, or in one word by sensing them. It underlines the primacy of sensory experience in epistemology; see, Maurice Merleau-Ponty, *The Primacy of Perception*, trans. by James Edie (Evanston, Illinois: Northwestern University Press, 1964), pp. 12-42. The research on the sensory experience of Byzantine art is expanding. For perception of colour in Byzantium with its emphasis on saturation and brightness, see Liz James, *Light and Colour in Byzantium* (Oxford: Clarendon Press, 1996); for metaphors grounded in perception and perceptual theory Robert S. Nelson, 'To Say and to See: Ekphrasis and Vision in Byzantium', in *Visuality before and beyond the Renaissance: Seeing As Others Saw,* ed. by Robert S. Nelson (Cambridge: Cambridge University Press 2000), pp. 148-168; for the most recent synthesis of all senses in Byzantine art, see Bisserra V. Pentcheva, *The Sensual Icon: Space Ritual, and the Senses in Byzantium* (University Park, Pennsylvania: The Pennsylvania State University Press, 2010).

contemplation, and thereby to assess the spiritual responses to the design of Hagia Sophia.

My concept of 'archi-texts' for contemplation springs from Jones's phrase of 'architecture-assisted contemplation', which, in turn, mirrors David Freedberg's idea of 'image-assisted contemplation.' The latter used it to discuss the role of art in Western theology and popular religion.[68] My concept is, however, determined by Byzantine religious views, ambivalent as they may be, and by sources in which church architecture was a subject matter: *ekphraseis* of church buildings and inauguration hymns. As for Byzantine theology, it must be said that the Church Fathers made a clear distinction between the divine mystery and the economy of God, or economy of salvation. The former refers to the essence and being of One God in three persons, in other words, the internal life of the Trinity, and the latter to the external work of God in the world, such as creating and ruling the world: God's plan for its salvation.[69] This divide of the main doctrinal issues had consequences upon the function of church spaces. Not all Eastern Christians felt comfortable with the idea that sacred spaces could be contemplated *per se*. The matter depended largely on the exegetical tradition associated with either the Alexandrian (allegorical) or Antiochian (literal) schools of scriptural interpretation.[70]

For all these reasons, the concept of 'archi-texts' for contemplation is a much better approach than 'architecture-assisted contemplation.' It allows us to explore the degree to which Byzantine church architecture was regarded as a means of the contemplation of God Himself, or whether it was seen simply as a reminder to the viewer of the divine history and economy of salvation. Both views, associated with a specific type of devotional behaviour, vouch for the functioning of church buildings as sacred places. As a result, I contend that it is only by looking at 'the archi-text' for the contemplation of a specific church building in a given period that the interplay between church buildings and spirituality can be accurately explored.

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[68] David Freedberg, *The Power of Images: Studies in the History and Theory of Response* (Chicago-London: University of Chicago Press, 1989), esp. ch. 5 '*Invisibilia per visibila*: Meditation and the Uses of Theory', pp. 161-191.

[69] John Anthony McGuckin, *The Orthodox Church: An Introduction to its History, Doctrine, and Spiritual Culture* (Malden-Oxford: Blackwell, 2008), esp. ch. 3 'The Doctrine of the Orthodox Church I: The Glory of the Lord', pp. 120-181, and ch. 4 'The Doctrine of the Orthodox Church II: The Economy of Salvation', pp. 182-276.

[70] For how this issue was dealt in the Antiochian and Alexandrian exegetical schools, see McVey, 'The Domed Church', p. 111-117.

5. Encounters with Buildings, Architectural Experience and Religious Experience: Defining Key Terms

Before I outline my thesis, I need to clarify how I use the terms 'encounters with buildings' and 'architectural experience.' There are at least five ways of using the word 'experience.' According to the first meaning in the Oxford English Dictionary, this word is used to identify specific states of having been affected by, or having gained knowledge by, direct observation or participation: 'I experienced something by looking at… .' The second meaning relates to the description of practical knowledge derived from observation of, or participation, in events, or in a particular activity: 'I have 10 years' experience in the job.' Thirdly, the word describes the conscious events that make up an individual's life: 'life experience', 'in my experience', 'my experience suggests.' In the fourth meaning, 'experience' stands for something personally encountered, undergone or lived through, as in the example, 'I experienced happiness'. The fifth meaning of the word 'experience' relates to the act or process of directly perceiving events or reality.

In this thesis, when describing and discussing buildings, I use the word 'experience' in its first and fifth meanings. Here, experience covers both specific states of having been affected by, or having gained knowledge through, direct observation or participation, and the process of perceiving objects. When used with the adjective 'spatial', the word 'experience' denotes the specific state of a person being affected by perceiving objects within a confined space. Spatial experience summarises people's interaction with the physical environment, as it links the sensory-motor responses of the human body to that experience. Spatial concepts such as up-down, front-back, in-out, near-far arise out of bodily spatial experience.

Spatial experience is different from 'architectural experience' or 'encounters with buildings.' An 'architectural experience' refers to a specific experience of architectural space. The most precise definition of architectural space I can provide is as a space associated with an architectural function. This means that architectural space responds to an immediate utilitarian purpose, that it carries historical and technological information, and that it has an expressive content. It also means that architectural space supports meanings and plays a role in generating social relations. In other words, architectural space is the basic spatial unit that structures the whole space system within which people live and move, in which they profess values and

practise beliefs.[71] It is also an existential space made real through people's interaction with and use of spaces for various needs. The comprehension of the essential characteristics of architectural space rests on spatial relations and qualities, such as openness, spaciousness, jaggedness, evenness, super-fluidity, which are perceived when such spaces are used for various purposes, and hence, in motion.[72] Moreover, I find that the concepts of *spatial layout* and *spatial configuration* define in a better way the spatial relations between the parts of a building.[73] In recent architectural studies, *spatial layouts* are understood as configurations of related spaces, whereas *spatial configurations* are seen as connections which consider other spatial relations in a complex.[74]

As for 'encounters with buildings' and 'architectural experience', these terms have been employed interchangeably.[75] However, I will use 'encounters with buildings' to refer to sensory-perceptual experience induced primarily by spatial forms as well as the built environment, an experience which is not necessarily connected to the practical use of buildings. In contrast, I will regard an 'architectural experience' as being linked to the use of the building, for instance, as a church. By experiencing this basic utilitarian function of the building as an ultimate purpose, people make sense of the world around as 'concretisation' or 'objectivisation' of existential space.[76] In this respect, the experience of the architectural space is a mediating existential experience between the space experienced as a whole and the subjective representations of the space that people develop depending on their cultural background.[77]

When I refer to 'religious experience', I use the word 'experience' as being synonymous with 'consciousness', as in the example statement, 'I was sound asleep and did not experience a thing.' In recent neuroscience studies, 'experience' has been regarded as a subcategory of 'transitive consciousness', that is, a type of consciousness

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[71] Bill Hillier and Julienne Hanson, *The Social Logic of Space* (Cambridge–Sydney: Cambridge University Press), p. ix-xii.
[72] Bruno Zevi, *Architecture as Space: How to Look at Architecture,* trans. by Milton Gendel (New York: Horizon Press, 1957), p. 23-27.
[73] Hiller and Hanson, *The Social Logic,* esp. pp. 26-51, 52-81.
[74] Hiller and Hanson, *The Social Logic*, pp. 82-142.
[75] For a review of the debate on the experience of buildings and architectural experience see Richard Hill, *Designs and Their Consequences: Architecture and Aesthetics* (New Haven and London: Yale University Press, 1999), esp. pp. 61-85.
[76] Richard Padovan, *Dom Hans van der Laan: Modern Primitive* (Amsterdam: Architectura and Natura Press, 1994), p. 37, Christian Norberg-Schultz, *Existence, Space and Architecture* (London: Studio Vista, 1971), p. 37.
[77] For architecture as strengthening the existential experience, see Juhani Pallasmaa, *The Eyes of the Skin, Architecture and the Senses* (Chichester: John Wiley&Sons Ltd, 2005), esp. p. 41.

which has an object to experience.[78] In this sense, 'experience' is best understood as 'becoming aware of something.' One can be aware of something despite not consciously paying attention to it. In this thesis, I regard religious experience as the process of becoming aware of the presence of God, after which a person feels transformed. Moreover, this transformative experience can be influenced by what is sensorially and aesthetically experienced in sacred spaces, theologically formulated and symbolically interpreted within a dynamic cultural system, and continually socially re-constructed.

6. Outline of the Thesis

My analysis of the 'archi-texts' for contemplation in Byzantium begins with the examination of the sixth-century Byzantine responses to Hagia Sophia. The first two chapters examine how the Byzantines physically encountered the church, drawing evidence from the *ekphraseis* of Hagia Sophia written by Procopius of Caesarea and by Paul the Silentiary. The reading of these texts focuses on the way in which the descriptions inform us about the experience of viewing, using the church, and making sense of the spatial layout and architectural space. In Chapter One, I look at the way Procopius' literary account was constructed and the perceptual metaphors employed, which give evidence of how Hagia Sophia was experienced. In Chapter Two, the discussion centres on how the order in which the architectural features of Hagia Sophia were described provides key evidence for the way the spatial layout of Hagia Sophia was perceived. The second chapter concludes that the spatial design of Hagia Sophia was perceived, and thus described, in terms of two basic spatial units, the nave and the side aisles, by both Byzantine writers.

In Chapter Three, I continue with textual evidence, turning my attention to the inauguration hymn composed for the second dedication of Hagia Sophia in order to examine how the Byzantines viewed the church in theological terms. My analysis is centred on the theological attributes of Hagia Sophia as a *domus dei*, a place of encounter and worship, a lieu for sacrificial rituals, and as 'heaven on earth.' This reveals the church of Hagia Sophia as a symbolic sign invested with cosmological and theological meanings.

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[78] Maxwell Bennett and Peter Hacker, *Psychological Foundations of Neuroscience* (Malden, MA: Blackwell, 2003), pp. 246-247.

In Chapter Four, I investigate, with reference to the descriptions of the sixth-century writers, the extent to which the spatial layout of Hagia Sophia induces a well-structured and a gradual hierarchical experience of the architectural space. The architectural investigation is centred on two aspects. It first deals with the classification of the Hagia Sophia as a basilica and/or as a centrally planned structure. Second, it attempts to identify whether the spatial layout of Hagia Sophia supports the perception of the church as a centralised building, and explores its implications.

In the final chapter, I link the architectural evidence to the theological understanding of the church to consider whether the experienced architectural space of Hagia Sophia augmented the experience of the divine during the Eucharistic rituals. Thus, this architectural experience rationalised in theological terms would have influenced the way the Byzantines talked about their religious experiences while being in the church and how they thought of their churches as 'heaven on earth.' I focus particularly on the implications of the experience of architectural space as cosmos, and the aesthetic experience of the church design. An overview of this thesis shows that formulating a theology of the sacred space in which church architecture represented 'heaven on earth' was part of the spiritual process of becoming aware of the presence of God.

CHAPTER ONE

The Experienced Architectural Space of Hagia Sophia: Procopius' Account

Introduction: Approaching Sixth-Century *Ekphraseis* of Hagia Sophia

This chapter examines the way in which the Byzantines physically encountered the church of Hagia Sophia and how they described the experience of its architectural space in the sixth century. To this end, Procopius of Caesarea's *ekphrasis* of the church of Hagia Sophia (the Great Church) in *Buildings* (Περί Κτισμάτων or *De Aedificiis*), book one, chapter i, lines 20-78 will be read from the perspective of what one is expected to sense, perceive and embody when present within the church walls. The aim is to establish whether the description of the interior space of Hagia Sophia was directly influenced by a first-hand experience of the church. This undertaking is essential in understanding Byzantine approaches to church architecture in the sixth century. More specifically, it is of vital importance in pinpointing the role played by perceptual representations of sacred space in the descriptions of the Great Church, as well as the Byzantines' attribution of spiritual meanings to the physical site.

The *Buildings* consists of six books centred on Justinian's building projects both in Constantinople and elsewhere in the Byzantine Empire.[79] It deals with churches and fortifications, treated not as subjects in and of themselves, but rather as a means to portray Justinian as the 'builder of the world' (ὁ τῆς οἰκουμένης οἰκιστὴς).[80] The descriptions of the edifices do not follow a set literary pattern; they can be very brief, as

[79] There is a vast literature on Procopius' *Buildings*; for its genre and the relation between rhetoric and Justinian's edifices, see Averil Cameron, *Procopius and the Sixth Century* (London: Duckworth, 1985), pp. 84-112; Anthony Kaldellis, *Procopius of Caesarea,* pp. 45-61; Johannes Irmscher, 'Justinian als Bauherr in der Sicht der Literatur seine Epoche', *Klio,* 59 (1977), pp. 225-229; Webb, 'Ekphrasis, Amplification and Persuasion in Procopius' Buildings,' *An Tard,* 8 (2000), pp. 67-71; Mary Whitby, 'Procopius' Building, Book I: A Panegyrical Perspective,' *An Tard,* 8 (2000), pp. 45-57; Michael Whitby, 'Pride and Prejudice in Procopius' Buildings: Imperial Images in Constantinople,' *An Tard,* 8 (2000), pp. 59-66; Denis Roque, "Les Constructions de Justinien de Procope de Césarée: document ou monument,?" *Comptes-rendus des séances de l'Académie des Inscriptions et Belles-Lettres*, 142 (1998), pp. 989-1001; Jaś Elsner, 'The Rhetoric of Buildings in the *De aedificiis* of Procopius', in *Art and Text in Byzantine Culture,* ed. by Liz James (Cambridge: Cambridge University Press, 2007), pp. 33-57.

[80] Procopius, *Buildings* IV.i.17.

little as three lines, or detailed, up to 58 lines as in the case of the *ekphrasis* of Hagia Sophia. There is contention regarding its publishing date, 554/5 or 560, but scholars do agree that Procopius described the first Justinianic Hagia Sophia before the collapse of the dome which took place in 558.[81]

This introduction will place my work in the context of the current research on Byzantine *ekphraseis,* and will indicate points of departure where the present study has sought to cover new ground. Descriptions of buildings in general, and of Hagia Sophia in particular, have often been valued for the architectural and archaeological information they provide, being extensively used to reconstruct the architecture of lost or partly destroyed monuments.[82] In the case of Hagia Sophia, Procopius' description was used as the main source for reconstructing of the dome of the first Justinianic church built in 532-537.[83] When *ekphraseis* of buildings were read for this purpose, the rhetorical character of the texts was disregarded altogether. For example, Henry Maguire's evaluation of Byzantine descriptions in 1981 is emblematic of the way *ekphraseis* were approached in the second half of the twentieth century: 'For the modern historian these descriptions can provide invaluable glimpses of the Byzantine art that has been lost or destroyed, once their coatings of rhetorical verbiage have been stripped away.'[84] Maguire's view was shared by many other scholars during that time.[85]

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[81] For 554, see Cameron, *Procopius and the Sixth Century*, pp. 84-85, Geoffrey Greatrex, 'Recent Work on Procopius and the Composition of Wars VIII,' *BMGS,* 27 (2003), pp. 45-67, Brian Croke, 'Procopius' *Secret History*: Rethinking the Date,' *GRBS,* 45 (2005), pp. 405–431. For 560, see Glanville Downey, 'The Composition of Procopius, *De Aedificiis,*' *TAPA,* 78 (1947) pp. 171-183, James A.S. Evans, 'The Dates of the "Anecdota" and the "De aedificiis" of Procopius,' *CPh,* 64 (1969), pp. 29-30, Michael Whitby, 'Justinian's Bridge over the Sangarius and the Date of Procopius' de *Aedificiis*,' *JHS,* 105 (1985), pp. 129-148, James A. S. Evans, 'The Dates of Procopius' Works: A Recapitulation of the Evidence,' *GRBS,* 37 (1996), pp. 301–313, Denis Roque, 'Les Constructions de Justinien de Procope de Césarée,' *AnTard*, 8 (2000), pp. 31-43.

[82] Henry Maguire, *Art and Eloquence in Byzantium* (Princeton, New Jersey: Princeton University Press, 1981), and Maguire, 'Truth and Convention in Byzantine Descriptions of Works of Art', *DOP,* 28 (1974), pp. 113-140, esp. p. 115.

[83] Kenneth J. Conant, 'The First Dome of St. Sophia and its Rebuilding', *AJA,* 43 (1939), pp. 589-591; Rabun Taylor, 'A Literary and Structural Analysis of the First Dome of Justinian's Hagia Sophia, Constantinople', *JSAH,* 55 (1996), pp. 66-78. The most recent reconstruction has the description as a point of departure, but the result is based on a model studying the static and dynamic behaviour of various shapes of the dome under diverse magnitude simulated earthquakes, see Ahmet Çakmak, Rabun Taylor, Eser Durukal, 'The Structural Configuration of the First Dome of Justinian's Hagia Sophia (AD 537-558); An Investigation based on Structural and Literary Analysis', *Soil Dyn Earthq Eng,* 29 (2009), pp. 693-698.

[84] Maguire, 'Art and Eloquence,' p. 23.

[85] Stormon's approach to Bessarion's *Encomion to the City of Trabizond* follows the same line of reasoning: 'It is still too dominated in part by rhetorical conventions to commend itself entirely as good literature, good history, or good description, all of which it sets out to be. However, in spite of the occasional toying with figures of speech or other displays of verbal virtuosity, and in spite, too, of the obvious

In contrast to this approach, other scholars have recently taken a more inclusive approach to architectural descriptions, also valuing them for their rhetoric.[86] Instead of being an inconvenient attribute of *ekphraseis,* rhetorical *topoi* are now viewed as having meaning within Byzantine material culture and therefore as being useful to the modern reader because they provide information about how art functioned at various levels.[87] A better understanding of rhetoric in Byzantium has also contributed to the present scholarly shift.[88] Even Maguire has changed his view.[89] In brief, the new approach considers that *ekphraseis* were intended to parallel or structure the art rather than to illuminate its physical reality. As a result, an *ekphrasis* does not necessarily address the physical appearance of the art, but rather the subjective response of the person looking at it. For that reason, *topoi* become key elements in understating how the Byzantines perceived, interacted with, and integrated works of art into their lives.[90] Ruth Webb argued that the rhetorical means commonly encountered in *ekphraseis* of religious structures impart the experience of viewing the church space as a sacred one imbued with spiritual and aesthetic content.[91]

In her extensive work on *ekphraseis*, Webb highlighted two important issues regarding the tangible experience of the architectural space in Byzantine *ekphraseis*. She revived an overlooked but important point made by a German scholar that the sixth-century *ekphraseis* of Hagia Sophia could illustrate a visitor's spatial experience of the

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idealization of Trebizond, past and present, a good deal factual information is conveyed.' See, E.J. Stormon, 'Bessarion before the Council of Florence: A Survey of His Early Writings (1423-1437)', in *Byzantine Papers: Proceedings of the First Australian Byzantine Studies Conference, Canberra, 17-19 May 1978* ed. by Elizabeth Jeffreys et al (Canberra: The Australian National University, 1981), p. 114.

[86] I am using rhetoric in both its most technical sense (effective use of language) and more general sense (ways of expression) as employed by Averil Cameron, *Christianity and the Rhetoric of Empire: The Development of Christian Discourse* (Berkeley: University of California Press, 1991), p. 13.

[87] This approach goes beyond the confines of Byzantine studies. It is also applied to the Renaissance art; see, Christine Smith, *Architecture in the Culture of Early Humanism: Ethics, Aesthetics and Eloquence 1400-1470* (Oxford: Oxford University Press, 1992); Smith and Joseph F. O'Connor, *Building the Kingdom: Giannozzo Manetti on the Material and Spiritual Edifice* (Tempe, Arizona: Arizona Center for Medieval and Renaissance Studies and Turnhout: Brepols, 2006).

[88] See, Elizabeth Jeffreys (ed.), *Rhetoric in Byzantium: Papers from the Thirty-Fifth Spring Symposium of Byzantine Studies*, Exeter College, University of Oxford, March 2001 (Burlington: Ashgate, 2003).

[89] Maguire, 'Originality in Byzantine Art Criticism', in *Originality in Byzantine Literature, Art, and Music*, ed. by Antony Littlewood (Oxford: Oxford University Press, 1995), pp. 101-114.

[90] James and Webb, '"To Understand Ultimate Things"', p. 14; Robert S. Nelson, 'To Say and to See: Ekphrasis and Vision in Byzantium', in *Visuality before and beyond the Renaissance: Seeing As Others Saw,* ed. by Robert S. Nelson (Cambridge: Cambridge University Press, 2000), pp. 148-168; Liz James, 'Introduction: Art and Text in Byzantium', in *Art and Text in Byzantine Culture,* ed. by Liz James (Cambridge: Cambridge University Press, 2007), pp. 1-12.

[91] Ruth Webb, 'The Aesthetics of Sacred Space: Narrative, Metaphor and Motion in *Ekphraseis* of Church Buildings', *DOP,* 53 (1999), pp. 59-74, esp. p. 69.

central nave of the church.[92] Additionally, she drew attention to the fact that the actual experience of the beholder moving about the church might have played an important role in attributing movement to the architectural features described, such as columns and vaults.[93] Although Webb did not pursue this line of thought, leaving it somewhat at the level of a common-sense conjecture, her remarks nonetheless answered two important questions raised previously by Maguire. The first was about the relationship between texts and art: was it art that informed the text, or was the art informed by the text? 'Did painting influence literature, did literature influence the painting or were there interchanges between the two media?'[94] Closely interlinked, but springing from the practice of composing *ekphraseis* based on classical models in Late Antiquity, the second question raised by Maguire was whether the Byzantine writers described what they had seen. It was often assumed by scholars, and proved by Maguire in some cases, that a number of Byzantine writers stayed too close to rhetorical textbooks and pieced their *ekphraseis* together from a wide variety of sources without actually seeing the object described.[95] In the case of Procopius' *ekphrasis* of Hagia Sophia, Webb has suggested a strong link between the writer's experience of viewing the church and the rhetoric of the text as a whole.[96]

Webb's conclusive research is the starting point for my analysis of Procopius' *ekphrasis.* However, my study has sought to shift the focus from the experience of viewing the church to the experience of the architectural space. This means that I move the analysis of a step-by-step view of the building to that of a spatial exploration of the building constrained by the architectural layout and hence a record of the perceptual representation of the architectural space. In so doing, the current scholarship of *ekphraseis* is taken into the realm of perceptual representations of architectural spaces and their cognitive value. My analysis of Procopius' *ekphrasis* will therefore address two separate issues but thoroughly interconnected: readings of Hagia Sophia's spatial layout, and the cognitive value of rhetorical representation of the church in the sixth century. The first part of this chapter examines to what extent the structure of the text, the critical appraisal of the building design, and the rhetorical method of presenting the material can inform us about the spatial experience of Hagia

[92] Oskar Wulff, 'Das Raumerlebnis des Naos im Spiegel der Ekphrasis', *BZ,* 30 (1929-1930), pp. 529-539.
[93] Webb, 'The Aesthetics of Sacred Space', p. 69.
[94] Maguire, *Art and Eloquence,* p. 28.
[95] Maguire, 'Truth and Convention', p. 114.
[96] Webb, 'The Aesthetics of Sacred Space', p. 69.

Sophia in the sixth century. An analysis of the structure of the text is important because it clarifies the order in which the building was described, reveals the organisational principle of Procopius' *ekphrasis*, and indicates how Hagia Sophia was perceived by the Byzantines as an architectural object. The second part of the chapter investigates the rhetorical fabric of the *ekphrasis*, particularly exploring what might have prompted Procopius to use certain metaphors. My investigation is rooted in the inference that standard metaphors can also be understood as perceptual ones which translate visual processes involved in perception of the architectural space into spoken/written words.

This research has been consciously based on the specific assumption that before the building was described in words it had been visited, and hence spatially experienced by the Byzantines who wrote about it in the sixth century. Given the church's location in Constantinople, the capital of the Byzantine Empire, and its political-ecclesiastical importance in the sixth century, this is a plausible assumption.[97] However, I do not rule out the possibility that Procopius also relied on other classical examples of *ekphraseis* of buildings when he penned his description of Hagia Sophia. My working premise is that Procopius relied on both his personal experience of perceiving Hagia Sophia's interior space and on other *ekphraseis* of buildings. Clarifying how much Procopius stayed within the longstanding practice of writing *ekphraseis* of buildings in Late Antiquity will contribute to explaining shifts in aesthetics of buildings and approaches to the physicality of Hagia Sophia's architecture in the sixth century.

1.1 Procopius' *Ekphrasis* of Hagia Sophia: Overview

Procopius began his account of Hagia Sophia with a comprehensive introduction where he made clear the historic-political context for the building of a new church. In lines 22-26, Procopius presented the historical events leading to Justinian's undertaking: the Nika revolt of 15 January 532 and the destruction of the old church by a fire. His presentation is, however, built on the architectural value of the building. Hagia Sophia was such an outstanding building that people would have not minded the destruction of the former church in order to have the new one (line 22). Procopius was very keen to emphasise Justinian's involvement in the rebuilding of the

[97] There is agreement on Hagia Sophia's importance in the sixth century. For details of the contentious place of the Great Church in the fourth century see, Wendy Mayer, 'Cathedral Church or Cathedral Churches? The Situation at Constantinople (c.360-404 AD)', *OCP*, 66 (2000), pp. 49-68.

church, to the extent that both *mechanopoioi*, Anthemius of Tralles and Isidorus of Miletus, were seen as only assistants to the emperor.

In lines 27-31, Procopius stated that Hagia Sophia was a 'spectacle of what is most beautiful' (θέαμα κεκαλλιστευμένον) and specified his reasons for this statement. The interior of the edifice was spacious, having a considerable height that matched the sky. From its exterior, Hagia Sophia dominated the skyline. The Great Church was built on such a grand scale to exhibit its superiority to the other buildings in Constantinople. Having located the edifice within the urban landscape of Constantinople, Procopius returned to Hagia Sophia's interior space. He proposed that the beauty of the church resided in the perfect harmony of the building's dimensions: the church should be praised for its proportions and grand scale, features that imply both outstanding technical skills and an overt aesthetic vision.

The subsequent lines, 32–49, were concerned with the main system of construction and the architectural design. The joint focus was on both detailing the process of building, and detailing the effects of the architectural solution upon the beholder. In these lines, Procopius employed technical terms that were at times diverted by metaphors, summarising the overwhelming effect of both the main structure and the specific elements, such as the dome and pendentives. Next, Procopius described the east end of the church, consisting of an apse flanked by exedras. The western side of the church, perceived by Procopius as similar to the eastern one, contained the entrances. He then described the main piers of the nave as marking its core. The structural system that made the transition from the rectangular plan of the nave to the circle of the dome caught Procopius' interest and was thus described in detail. When he moved to describing the upper structure of the building, Procopius emphasised that the dome appeared to be without support, as the transition between the upper and lower parts of the building was accomplished by means of pendentives. He ended his account of the main interior space by pointing out the visual effect of the dome. The whole upper structure had a big impact on the beholder, as the eyes were drawn continuously along its surfaces.

In lines 50-53, Procopius was concerned with the stability of the edifice. To emphasise that the beautiful church was also a very strong and steady construction, Procopius recalled how the master-builders strengthened the main piers. He painstakingly pointed out the use of different techniques and building materials by the *mechanopoioi* to achieve this firmness.

In the following part, 54-65, Procopius returned to the description of the church, paying attention mainly to the adjacent spaces of the central nave: the aisles, the upper galleries and their conspicuous ornaments. However, he opened this sequence by mentioning the decoration of the nave ceiling and ended it with a few lines describing the overall adornment of the church, especially the play of colours and designs on the columns of the aisles. In this part, Procopius attempted to supply the reader with information regarding the functional zoning of several spaces, such as the fact that the galleries were reserved for women.

Procopius then described the impact of the quality of the light and the shining surfaces of the church upon those who entered. He linked the aesthetical force of the church's design to the majesty of God on two levels. First, he claimed that the design was accomplished under divine guidance, and thus was a direct result of God's intervention. Second, beholders were bound to feel the presence of God and the certitude of God dwelling nearby because of the beauty of this building. The aesthetic-theological aspect of the design was re-actualised by the beholder each time the church was encountered. Procopius chose to end this passage by assuring the readers that, although magnificence was the main attribute of the church and could be perceived even at the level of liturgical objects, the overall effect was not excessive (63-65).

In lines 66-78, Procopius brought the account of Hagia Sophia to an end by acknowledging the emperor's determination to build a place where God would love to dwell. Hagia Sophia's completion was above all possible because of divine assistance. The imperial logistics, such as money, high quality building materials and the most able *mechanopoioi* of the empire, although a prerequisite for such a grand vision, were not sufficient. God inspired the emperor when he needed to make decisions concerning matters beyond a *mechanopoios*' expertise, as was the case with the stability of the arches and the dome. By specifying God's intervention in re-building Hagia Sophia, Procopius portrayed the emperor as His servant.[98]

It is apparent that rhetoric can be a barrier that prevents the reader from getting a clear idea of how the architectural space was actually experienced, what the Byzantines thought of Hagia Sophia and how much of Procopius' account was factual.[99] This prompts an investigation into the critical appraisals of the church

[98] Philip Rousseau, 'Procopius's *Buildings* and Justinian's Pride', *Byzantion,* 68 (1998), pp. 121-130.
[99] For rhetoric as a barrier in Byzantine literature, see Margaret Mullett, 'The Madness of Genre', *DOP,* 46 (1992), pp. 233-243.

design and the rhetorical structure of this *ekphrasis*. This exploration is necessary to clarify to what extent the rhetorical structure of the text is sustained by the critical appraisals of the church design, and also to understand how Byzantine *ekphraseis* informed taste and passed judgments.

1.2. Critical Appraisal of Hagia Sophia's Design and the Rhetorical Structure of Procopius' *Ekphrasis*

Procopius' account does not lack critical appraisals of the church design; they are scattered all over the text. The church was a 'spectacle of marvellous beauty' (θέαμα κεκαλλιστευμένον), 'more pretentious' (κομπωδεστέρα) and more noble/well-ordered (κόσμιωτέρα) than any other building and 'it raised up over the whole earth' (ὑπεραίρει τὴν γῆν ξύμπασαν). These are just a few examples of evaluative thought and fit into the category of peoples' subjective response to buildings.[100] However, although there are many examples of Late Antique evaluative *ekphraseis* of buildings, scholars are still to be convinced by the level of critical thought displayed in such texts.[101] Most scholars tend to interpret such statements as indirect praises to the patron or attempts to make an ideological point. In Procopius' case, such literary licences have been read as sheer flattery.[102] As any other text, *ekphraseis* are open to interpretation and Late Antique writers of the preliminary exercises of rhetoric known as *progymnasmata* (προγυμνάσματα) failed at times to make clear the degree of critical thought that an *ekphrasis* of a building should include.

For instance, Aelius Theon of Alexandria, the writer of one of four extant Greek texts on *progymnasmata,* dismissed the evaluative character of *ekphraseis* altogether: 'When describing things in a topos we add our own judgment, saying something is good or bad, but in *ekphrasis* there is only a plain description of the subject'.[103] Indeed,

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[100] For evaluation as part of people's responses to buildings, see Thomas A. Markus and Deborah Cameron, *The Words Between the Spaces: Buildings and Language* (London: Routledge, 2002), esp. p. 92-119.

[101] For examples of critical appraisals in *ekphraseis* of buildings, see Lucian of Samosata, *The Bath or Hippias*, Greek text and English trans. by A.M Harmon, [Loeb ed.] (London-New York: Heinemann and Macmillan, 1913), pp. 33-47; Menander of Laodicea, *Treatise I.3*. 1-387: 'How to praise cities for accomplishments', Greek text and English trans. by Donald A. Russell and N.G. Wilson in *Menander Rhetor* (Oxford: Clarendon Press, 1981), pp. 58-75.

[102] See, Anthony Kaldelis, *Procopius*, pp. 51-58.

[103] Aelius Theon, *Progymnasmata* 119, 10-15: δὲ ὅτι ἐν μὲν τῷ τόπῳ τὰ πράγματα ἀπαγγέλλοντες προστίθεμεν καὶ τὴν ἡμετέραν γνώμην ἢ χρηστὰ ἢ φαῦλα λέγοντες εἶναι, ἐν δὲ τῇ ἐκπράσει ψιλὴ τῶν πραγμάτων ἐστὶν ἡ ἀπαγγελία; Greek text ed. by Michel Patillon (Paris: Les Belles

Late Antique rhetorical theory stressed the narrative or descriptive dimension of *ekphraseis*. In practice, nevertheless, the same authors brought forward highly evaluative descriptions. Theon's examples of *ekphrasei*s included particulars and subjective remarks on beauty and the greatness of the objects described, contradicting his own prescriptive rules.[104]

My approach to this point in question is to consider the way in which Procopius handled it and to peruse evaluative thoughts within the literary structure of the text. It involves exploring how the thematically driven paragraphs relate to each other and to the whole *ekphrasis* and where critical appraisals come in. For this, I will draw parallels between Procopius' rhetorical structure and that of a modern-day architectural review. A building review is concerned with the assessment of building design and the architectural object as a whole. It is a text that explicitly illustrates how the building functions at various levels, entailing thus a description and evaluation of the object scrutinised.[105] Although its relevance for Late Antique *ekphraseis* can be easily dismissed, a modern building review allows the reader to get a clearer picture of how an *ekphrasis* works as a rhetorical text when taken out of its ideological context. In this way, Procopius' critical appraisal of Hagia Sophia can be read for its own sake, as an immediate and subjective response to the design which is only later on webbed into the culture of the time or of the observer's cognitive background and thus politically coloured.

Rosario Caballero's recent research on how architectural reviews have been penned showed that texts concerned with architecture in general display a certain level of rhetoric, regardless of their primary purpose and ways of organising the content.[106] The reviewers always resort to rhetorical strategies to make a point or just to assess architecture. Evaluation, although sometime in disguise, contributes to a clear literary or rhetorical structure of the review. According to Caballero, the three main sections of a building review – introduction, description and closing evaluation – are structured in textual sequences, which in turn sometimes develop autonomously, in

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Letters, 1997), p. 68 and English trans. by George Kennedy in *Progymnasmata: Greek Textbooks for Prose Composition and Rhetoric* (Atlanta: Society for Biblical Literature, 2003), p. 46.

[104] For the 'mismatch' between theory and practice in Late Antique and Byzantine *ekphraseis* of buildings, see Webb, 'Ekphraseis of Buildings in Byzantium: Theory and Practice', *BSI,* 3(2011), pp. 20-32, esp. p. 21.

[105] Rosario Caballero, *Re-Viewing Space. Figurative Language in Architects' Assessment of Built Space* (Berlin-New York: Mouton de Gruyter, 2006), p. 34.

[106] Caballero, 'Metaphor and Genre: The Presence and Role of Metaphor in the Building Review', *Appl Linguist,* 24 (2003), pp. 145-167.

order to support the overall evaluation feature that a review ought to have.[107] Caballero proposed that an introduction consists of three movements or sequences: creating context, introducing the building and providing a first evaluation of the building. Table 1 shows that Procopius' account was composed according to a similar structure.

Procopius placed the entire project of Hagia Sophia in a historical and political context (20-26), introduced the building by a means of a theological discussion on the name of Hagia Sophia (21) and then provided his first evaluation of the church (27-30). Caballero observed that people writing about buildings often compile their criteria and state the reasons why a particular building is worth evaluating in the introduction. In Procopius' case, it seems that the proportions of Hagia Sophia and the technical skills needed to secure the stability of the building comply with these criteria (25-30).

Caballero claimed that the main body of a building review provides the technical details of the building and outlines the spatial organisation and the external appearance. By highlighting different parts of the building, reviewers point out its outstanding features. Procopius also dealt with the main architectural features that make up the interior space of Hagia Sophia, the inner and the outer shells (31-46, 54-60), and he stressed the outstanding feature of Hagia Sophia: the dome (61-63). Procopius not only outlined the spatial configuration of the church, but also alluded to the spatial appearance of the church when he mentioned the spatial impact of the dome, and the spiritual awareness one was bound to find inside the church. By addressing the structural stability of the edifice and furnishing details of the fabric of Hagia Sophia, Procopius covered all the aspects needed in an evaluative review.

The third structural part of a building review offers the author's final comments on building design. These are in fact amplifications of the initial assessment in the introduction. The closing assessment of the building might include an evaluation of the architect's skills. Because of this, the reviewer places the building within a broader context of similarly outstanding pieces of architecture. Procopius dealt with this aspect in a different manner. By recounting the technical problems encountered during the building process, he regarded the church of Hagia Sophia as amongst the greatest technological achievements of Justinian's time. Indeed, his concluding passage offers an evaluation of the designer's skills, although he rhetorically deflected the emphasis from the architects' skills to the emperor's divinely inspired initiative.

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[107] Caballero, *Re-Viewing Space,* Table 1: 'Rhetorical structure of the building review', p. 54.

Table 1 Content Analysis of Procopius *Ekphrasis* of Hagia Sophia in *Buildings* I.i.20-78

Lines	Section	Lines	Sub-sections	Lines	Subject-Matter	Theme
20-26	**Intro**				The historic-political context for building a new church	Emperor's involvement in the project; highly technical skills required
27-65	**The main body Hagia Sophia's Description**	**27-30**	Opening	**27-30**	Hagia Sophia's design – 'spectacle of marvellous beauty'	Aesthetic value: perfect harmony of proportions
		31-46	Description of the inner structure of the church	**31-35**	Implicit description of the eastern part	Narration of the basic process of building from ground up
				36	Explicit description of the lateral parts	
				37-46	Explicit description of the upper central part of the church	
		47-49	Spatial impact of the design	**47-49**	Experience of space Visual impact of the structural elements	Perception of individual structural elements subordinated to the experience of central space
		50-53	The stability of the architectural structure	**50-53**	Insights into the fabric of Hagia Sophia	Different techniques and materials used to strengthen the central structure
		54-60	Description of the outer structure of the building	**54-60**	Brief description of the aisles, decoration of the vaulting system	Aesthetic value, decorations
		61-63	Spiritual impact of the design and dome	**61-63**	Transcending the aesthetic value; the theological impact of the design	Theological value: The building sends the beholder to God
		64	Liturgical furniture	**64**	Liturgical vessels – the beauty of the church is paralleled by exquisite liturgical furniture and vessels	
66-78	**Coda**	**66-67**	Imperial encomium	**66-67**	Technical problems encountered during the process of building	Emperor's involvement in design

It seems that Procopius' *ekphrasis* is structured in independent literary parts (e.g. introduction, main body and conclusion), which contribute to a clear rhetorical structure imbued with critical appraisals of Hagia Sophia's design. The account was organised in such a manner as to give a conclusive assessment of Hagia Sophia's design. However, Procopius' critical assessment was subservient to the praising of Justinian, the main drive of *Buildings*. I would submit that his *ekphrasis* contains as much evaluative thought and declamatory praise as needed in a text both describing Hagia Sophia and praising Justinian.

1.3 Mapping the Encounter with Hagia Sophia: Procopius' *Account*

The analysis of the content from the perspective of the architectural judgments made in the sixth century has highlighted the literary structure of the text. It has also made clearer the way in which Procopius approached the edifice. The following section further explores the manner in which the church was described in order to establish what kind of spatial experience Procopius managed to convey.

Most of the architectural features of the church are approached, and thus described, from the bottom up. Procopius also ordered the structural elements according to the longitudinal axis of the church, but organised his presentational sequences in a transversal axis of symmetry. Thus, he first paid attention to the eastern part of the church, where he described the shape of the apse at the ground level and then the level of the semi-dome (33). On top of it, another semi-dome was suspended (33-34). Describing again from the ground upwards, he proceeded with the exedras that flanked the main apse, covered by the small semi-domes (35). Procopius' order of describing the east end of the church is summarised in Figure 10.

Presented in this way, the passage describing the eastern side of the nave seems compact; however, Procopius relied on rhetorical devices to make the text as vivid as possible by focusing on the construction process of the apse. He prepared the reader for a narrative passage in which he explained the manner (*tropos*) in which the structure was made: 'and the face itself of the church was constructed in the following manner'.[108] He specified that 'the face of the church' (τὸ πρόσωπον τοῦ νεὼ) was the part of the building situated in the direction of the rising sun, and where the clergy performed the Eucharistic ritual. The eastern apse was a masonry structure that rose from ground level to a considerable height in a precipitous manner (ἐς ὕψος ἀπότομον ἐπανέστηκεν). On top of the 'fourth part of a sphere' (σφαίρας τεταρτημόριον) of the apse another 'crescent-shape' (μηνοειδές) rose and seemed to float in the air. Because of the rhetorical language employed, mainly verbs of motion, Procopius created a dynamic account of static elements.

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[108] Procopius, *Buildings* I.i.31: καὶ τὸ μὲν νεὼ πρόσωπον τρόπῳ τοιῷδε δεδημιούργηται. It is difficult to say whether Procopius just followed Thucydides' example of describing the Peloponnesian wall (Thucydides, *History*, 3.21.1-4) or he tried to make *tropos* a subject matter for *ekphrasis*. For Procopius' Thucydidean writing style, see Cameron, *Procopius,* pp. 37-46.

The next architectural unit described was the western part of the church. Procopius briefly pointed out that it was a wall with entrances, flanked by exedras and designed in a similar way to the eastern side (36). He completed his description of the nave in the centre of the church following the same ascendant movement, describing the elements from the bases of the four massive piers up to the arches, pendentives and the dome. The western and eastern arches were described as resting on curved surfaces, and seemingly without physical support they rose over empty air to a great height. The northern and southern arches rested on columns and brick masonry (40). Procopius then moved on to detail the upper circular structure of the church, which formed the base of the dome and was pierced by windows (41). This marks the first time that Procopius inverted his order of description, as he detailed the structural system that made the transition from a rectangular plan to a circle: the curved triangles, that is, the pendentives (44). Procopius ended his description of the main nave by describing the huge spherical dome (σφαιροειδὴς θόλος) and considering its visual impact at length (45-49). His order is summarised in Figure 11.

After a digression over common concerns about the stability of such a grand structure (50-53), Procopius returned to the description of the nave, mentioning that the entire ceiling (ὀροφή) was covered in gold tesserae that reflected light in abundance. This light therefore rivalled the gold itself in radiance and brightness (54). Then, he paid attention to the side aisles: 'two stoa-like colonnades' (στοαί), the upper galleries, and their vaulted ceiling (ὀροφὴ θόλος) (55-60). In a turn of phrase whereby he rhetorically questioned how they could possibly best be described, he mentioned that the church was surrounded by colonnaded aisles (περίστυλοι αὐλαί) (58). However, there was no information about the atrium in Procopius' account. Figure 12 highlights the order of elements described up to this point.

It becomes apparent that Procopius grouped the architectural features of Hagia Sophia into two separate spatial units, as shown in Figure 13: the inner structure of the church made by the eastern apse, the central nave and the upper part of the nave (31-46) and the outer structure with the aisles and galleries and their vaulting (55-60). His details included particulars about the use of the galleries by men and women. He then concentrated on the ornamentation of the interior space, comparing the decoration of capitals and mosaic to those from nature in ornate language (59-61). This passage was introduced by a rhetorical question:

> But who could fittingly describe the galleries of the women's side, or enumerate the many colonnades and the colonnade aisles by means of which the church is surrounded? Or who could recount the beauty of the columns and the stones with which the church is adorned?[109]

He concluded his technical account with a few lines on the overall visual and aesthetic impact of the design and its theological consequences (61-64).

Procopius' *ekphrasis* of Hagia Sophia also contains a circumstantial account of the manner or *tropos* (τρόπος) in which some parts of the building, such as the main piers, were constructed (50-53). Various scholars have emphasised that this type of description contributes indirectly to a vivid representation of the building.[110] What is striking in Procopius' account is the place of the technical account within the whole description of the church. It marks out conspicuously the two spatial units of the church, the nave and the side aisles, which were described in the same style, giving particulars on position (θέσις), size or greatness (μέγεθος) and beauty (κάλλος). This might explain why Procopius felt the need to redress the fact that the aisles were part of the same interior space. He emphasised that although the nave and the aisles had different heights, they belonged to the same interior space, as the aisles contributed to the general width of the church.

Another stylistic feature of Procopius' *ekphrasis* is the relatively large number of words used to relate impressions and subjective statements, especially in passages that summarised the impact of architectural forms upon the observant visitor. For instance, the technical description (27-50) abounds in subjective statements: 'for it seems somehow' (δοκεῖ γάρ πη) 'as if' (ὥσπερ), 'but even so' (ἀλλά καὶ ὡς). Michael Baxandall has stressed that this type of vocabulary comes naturally when a 'representational' subject matter is described.[111] The wording reflects the writer's experience of the object. Such a description does not re-create the building in a linguistic milieu, but becomes a representation of the experienced object. Of great

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[109] Procopius, *Buildings* I.i.58-59: Τίς δ' ἂν τῶν ὑπερῴων τῆς γυναικωνίτιδος ἑρμηνεὺς γένοιτο, ἢ τάς τε παμμπληθεῖς διηγοῖτο στοὰς καὶ τὰς περιστύλους αὐλάς, αἷς ὁ νεὼς περιβέβληται;τίς δὲ τῶν τε κιόνων καὶ λίθων διαριθμήσαιτο τὴν εὐπρέπειαν, οἷς τὸ ἱερὸν κεκαλλώπισται., English trans. by Dewing, *Buildings,* p. 27.

[110] Michel Beaujour, 'Some Paradoxes of Description', *YFS, 61* (1981), pp. 27-59, esp. p. 28 and Webb, 'Ekphraseis of Buildings in Byzantium', pp. 23-26.

[111] Michael Baxandall, *Patterns of Intention: On the Historical Explanation of Pictures* (New Haven and London: Yale University Press, 1985), pp. 2-4.

importance for evaluating Procopius' account is Baxandall's claim that this type of description can reproduce in words only to a limited degree the act of viewing the object. The description represents the experience of the object only after it has been internalised or rationalised and subsequently translated into words.

Looking at Procopius' account from the point of view of Baxandall's claim, the *ekphrasis* of Hagia Sophia abounds in representations of architectural features that have been viewed, experienced, related to others, and rationalised. It is worth remembering that Procopius began his proper description of the architectural space by giving a summary of the actual visual effect of the design, and an evaluation of the aesthetic qualities of the building. He placed the rationalised experience of the church before any description of the building or any records of sense impressions as the edifice was progressively encountered. It can be argued that Procopius' way of representing the interior space of Hagia Sophia by deconstructing it into two spatial units denotes clearly a rationalised spatial experience of the church.

1.4 How to Describe a Building and Its Interior Space: Precedents in Late Antiquity

Procopius' manner of describing Hagia Sophia is a case in point that can only be fully understood when compared with other *ekphraseis* of buildings in Late Antiquity. This investigation is necessary in order to establish the degree to which Procopius adhered to a longstanding theory and practice of writing descriptions of buildings. It will show that a rationalised spatial experience of the church was a novel way to convey the sense of interaction with the built environment and to shape an aesthetic theory in the sixth-century Byzantium.

In Late Antiquity, there was a well-established practice of describing things and places in the order in which the observant visitor experienced them: 'what preceded them and what is wont to result, from what surrounds them and what is in them.'[112] 'Begin with the first things and thus come to the last' was the golden rule for

[112] Aphthonius the Sophist, *Progymnasmata* 12.5: [πράγματα] δὲ ἀπὸ τῶν πρὸ αὐτῶν τε καὶ ἐν αὐτοῖς καὶ ὅσα ἐκ τούτων ἐκβαίνειν φιλεῖ, καιροὺς δὲ καὶ τότους ἐκ τῶν περιεχόντων καὶ ἐν αὐτοῖς ὑπαρχόντων, Greek text ed. by Hugo Rabe, *Aphthonii Progymnasmata* (Leipzig: B.G. Teubner, 1926), p. 37 and English trans. by George Kennedy, *Progymnasmata,* p. 117.

structuring an *ekphrasis*.[113] Although there were no explicit indications on how to write *ekphraseis* of buildings in Late Antique *Progymnasmata*, this rule led to *periegesis,* or leading around, as buildings were approached from a distance, walked around, and then entered. In other words, buildings were described in the order in which they were encountered. As a result, *ekphraseis* of buildings could record observations from distant and nearer views and then from inside. Exterior views could be easily ordered according to the above rule.

In contrast, descriptions of interior spaces could pose a challenge for writers of *ekphraseis,* because the perception of interior spaces is generally constrained by the spatial layout of buildings. A specific spatial organisation encourages the observant visitor to walk through spaces, to move about the building and to choose a path which does not necessarily comply with the rule of 'first things'. Moreover, the fact that some spaces become visible only when the observant visitor is moving about means that a description based on this rule could lack clarity.[114] Often, writers of *ekphraseis* needed to adapt or combine the *periegesis* with *tropos*.[115] More often though, writers avoided descriptions of interior spaces altogether, resorting to rhetorical statements that the beauty of things to be described surpassed their skills. This resulted in a dearth of examples of *ekphraseis* of buildings, and scholars have concluded that no accounts of interior spaces exist, be it of a pagan temple or a church, prior to the sixth century.[116]

This absence can be explained by the fact that some of *ekphraseis* were actually read out in front of the buildings described. Hence, the writers focused on external decorum and less on the interior spaces. This contextual protocol was reflected in the *ekphraseis* which inspired religious mediation rather than any sort of architectural enlightenment.[117] Although this is a valid point, I do not share the view that there were

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[113] Nikolaus, the Rhetor, *Progymnasmata* (*On Ekphrasis* 12): Αρξόμεθα δὲ ἀπὸ τῶν τρώτων, καὶ οὕτως ἐπὶ τὰ τελευταῖα ἥξομεν, Greek text ed. by Joseph Felten, *Nicolai Progymnasmata* [Rhetores graeci, vol. XI] (Leipzig: B.G. Teubner, 1913), p. 69; English trans. by George Kennedy, *Progymnasmata,* p. 167.

[114] Libanius complained that his rival, Bemarchios, went into such detail in his descriptions of columns and paths that he confused the audience as 'he rambled on and on about pillars, trellised courts, and intercrossing paths which came out heaven knows where.'/διεξιόντος αὐτοῦ κίονασ δή τιναξ καὶ κιγκλίδας ὁδούς τε ὑπ᾽ ἀλλήλων τεμνομένας ἐμπιπτούσας οὐκ οἶδ᾽ ὅποι; Libanius, *Oration* 1, 41, Greek text and English trans. by A. F. Norman (Oxford: Oxford University Press, 1965), pp. 28-29.

[115] Webb, '*Ekphraseis* of Buildings in Byzantium', pp. 23-24.

[116] Paul Friedländer, *Johannes von Gaza und Paulus Silentiarius*, pp. 99-100, Sandrine Dubel, *Dire l'évidence: philosophie et rhétorique antiques* (Imprint Paris: L'Harmattan, 1997), esp. ch. '*Ekphrasis* et *enargeia*: La description antique comme parcours', pp. 249-64; Webb, 'The Aesthetics of Sacred Space', p. 66.

[117] *Ekphraseis* recited in front of temples, such as the temple of Zeus at Olbia and at Olympus by Dio Chrysostom. For this, see, Laurent Pernot, *La rhétorique de l'éloge dans le monde gréco-romain* (Paris: Institute

no examples of *ekphraseis* of the interior of buildings in Late Antiquity that would stand as models for Byzantine writers. Instead, this study is based on the premise is that the extant *ekphraseis* need to be analysed in the context of the speeches on experienced objects and the level of sensory and perceptual experience contained in *ekphraseis*, so as to understand their organisational principles and turns of phrases. In what follows, I will highlight common features often found in e*kphraseis* of buildings and draw conclusions regarding Procopius' account.

The second-century *rhetor,* Aelius Aristides, wrote a panegyric on the temple of Hadrian at Cyzicus and no detail of the interior space of the temple was given.[118] This might be connected with the fact that Aristides' aim was not to praise the temple as such, but the harmony between the cities in Asia. The actual description of the temple (16-21) takes up no more than five lines out of 36 and Aristides ended it abruptly because, as he said, to praise such a finely designed temple was superfluous. He contended that if the temple was to be critically appraised, this would be better done by geometricians and technical experts.[119]

Aristides' rhetorical twist, which seems an excuse for not taking pains to describe the temple, is not a solitary case. The fourth-century *sophist*, Aphthonius of Antioch, abstained from describing the temple and the cult statue of the god Serapis in his *ekphrasis* of the shrine of Alexandria, because he found the beauty of the acropolis eclipsed his power to describe it, hence his reason for omitting it.[120] Such a circumlocutory way to end a description seemed to be preferred by many writers in Late Antiquity. Procopius followed in their footsteps when he claimed that words could not recount the beauty of the columns and stone that adorned the church, nor that an appropriate description of spaces surrounding Hagia Sophia was an easy thing to accomplish.

Procopius' *topoi* stressed a tension between the spoken word and the seen object or experienced space. The spoken word could not equal the object, whose visual

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d'Etudes Augustiniennes, 1993), tome I, ch. 4: 'Preparation, Pronunciation, Publication', pp. 424-475, esp. p. 441.

[118] Aristides, *Cyzicus Oratio* 27.1-46, Greek text ed. by Bruno Keil, *Aelii Aristidis Smyrnaei quae supersunt omnia* vol. 2: *Orationes* XVII-LIII (Imprint Berolini: Apud Weidmannos, 1898/1958), pp. 125-144 and English trans. by Charles A. Behr, *The Complete Works,* vol. II: *Orations 17-53* (Leiden: E.J. Brill, 1981), pp. 98-106.

[119] Aristides, *Cyzicus Oratio* 27. 21.

[120] Aphthonius of Antioch, *Ekphrasis of the Shrine of Alexandria with its Acropolis,* Greek text ed. by Hugo Rabe, *Aphthonii Progymnasmata* (Leipzig: B.G. Teubner, 1926), pp. 38-41 and English trans. by George Kennedy, *Progymnasmata,* pp. 118–120.

impact was greater than the weight of words. All of the Late Antique writers claimed at some point a linguistic impossibility, such as the one found in the Aphthonius of Antioch's *ekphrasis,* or a conceptual limitation, as implied by Aristides. What was recreated in the mind's eye was less than what was actually visible. The tension between the visual and aural senses is stressed in the very definition of *ekphrasis*: 'a descriptive speech showing what is portrayed vividly before the eyes'.[121]

It is worth noting here that the tension between hearing and seeing in *ekphraseis* of buildings was caused by the technique of *periegesis* itself, as the spatial experience would have overlapped the aural experience. Buildings and cities unfold in motion, which implies temporality, the same time span as is required by speech and hearing. The experience of buildings and the speeches about them arguably share a common element: time. When *periegesis* is employed, *ekphraseis* of buildings and cities recreate the sensation of movement, the spatial and temporal flow that is part of experiencing architecture. A case in point is Lucian's *Bath (Hippias).*[122] He described the building along a presumable itinerary, directly influenced by the spatial layout and the utilitarian purpose of the rooms.[123] It was however the movement through spaces which helped to outline the geometry of the building. His *periegesis* reinforced the idea that spatial layout was only revealed through movement.

Periegesis was also used by Eusebius of Caesarea in his fourth-century panegyric on the church at Tyre which is the first proper architectural description of an interior space of a church.[124] The architectural description (37-45) began with a view of the whole circuit of the precinct walls and then stopped at the atrium. The porch provided a full view into the succession of church spaces (38). From the gates, Eusebius described the atrium with porticoes and fountains, and then the vestibule of the church with its three entrances (41). He continued with the interior space of the church (43-44). After a few considerations regarding the size of the church, Eusebius described the ceiling and the pavement and then the liturgical furniture. He ended the

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[121] Aelius Theon, *Progymnasmata* 118.7: Ἔκπρασις ἐστι λόγος περιηγματικὸς ἐναργῶς ὑπ᾽ ὄψων τὸ δηλούμενον., Greek text ed. by Michel Patillon, *Progymnasmata,* p. 68.

[122] Lucian, *The Bath or Hippias*, Greek and English trans. by A.M Harmon, [Loeb ed.] (London-New York: Heinemann and Macmillan, 1913), pp. 34-45.

[123] Lucian, *Bath* 5-6, pp. 39-41.

[124] Eusebius of Caesarea, *Ecclesiastical History* X.iv.2-72 [panegyric on the building of the churches, addressed to Paulinus, bishop of the Tyrians], Greek text and English trans. by Kirsopp Lake, vol. 2, [Loeb ed.] (Imprint London: W. Heinemann and New York: G.P. Putnam's Sons, 1932), pp. 389-445.

description of the church as if following a visitor leaving it to see the rest of the complex building (45).

The description of the church took into consideration the physical movement of the observant visitor along the longitudinal axis. It is a kinaesthetically constructed description, as it gives a sense of spatial flow and motion. It retains the sense that the spatial organisation of the church imposed motion through all adjacent spaces. It is also important to notice that Eusebius stressed the visibility of spaces from the beginning of his description. The visual impact was so strong that the writer declared that the appearance of new spaces as observers moved through the building caught their eyes.[125] Although Eusebius used the description of the church as a transitional passage to a theological discussion, his *ekphrasis* was greatly indebted to Late Antique models. In addition, it reiterated the same rhetorical problems of dealing with beautiful things which go beyond description.[126]

In contrast to all of these examples, Procopius' description of Hagia Sophia is not an account of the spectator's encounter with the building per se. He did not describe it as if the church was approached from its urban context and entered from the surrounding courts. Moreover, he said nothing specific about the atrium and the adjacent buildings, such as the skeuophylakion and baptistery. Although Procopius shared the same concerns about seeing and hearing, he did not comply with Late Antique conventions surrounding this form of rhetoric.[127] His technique of description may seem similar to other Late Antique e*kphraseis* as it shared the same emphasis on the effect of the church on the beholder, colours and variety of materials, but his descriptive order barely relates to a global principle of *periegesis*. Instead, he focused on the spatial dynamics of the interior space of the church and described what was experienced from the nave. There was no flow from one space to another, only an animated architectural setting. It can be securely concluded that his method of organising factual information about the architecture of Hagia Sophia was unique. What then was Procopius' organisational principle based on?

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[125] Eusebius of Caesarea, *Ecclesiastical History* X. iv.38-39.
[126] Eusebius of Caesarea, *Ecclesiastical History* X. iv.44.
[127] Averil Cameron regarded Procopius' description as similar to other Late Antique examples. See, Cameron, *Procopius,* p. 99.

1.5 The Experienced Architectural Space of Hagia Sophia: Procopius' Case

Based on first-hand observation *in situ* (conducted as part of this study) and on Mainstone's description of the architecture of Hagia Sophia, the first architectural element seen when one passes through the double narthex is the east end of the church (Figs. 14a, b, c).[128] Procopius' technical description of Hagia Sophia started with the apse. From the double narthex, it is difficult to estimate the distance between the royal doors and the eastern apse, and the geometry of the east end of the church is not entirely visible. As one walks into the church through the royal doors, the piers that bind the apse on both sides are the next discernible element, while the flanking exedras are only partly visible (Figs. 15a, b). These become entirely visible when one walks into either side of the nave, leaving the longitudinal axis (Figs. 16a, b). Similarly, Procopius physically dealt with the eastern exedras as soon as he finished describing the apse and pointed to the semidome covering it (Figs. 17a, b). From this viewpoint, one can glimpse the spaces of the aisles and galleries, although they are not entirely visible and their geometry difficult to comprehend. This lack of a clear view might be one of the reasons why Procopius did not mention them initially. Approaching the middle part of the nave, the main piers and the open arcaded colonnades are fully encompassed in the visual field of the observant visitor. These elements came next in Procopius' account, as he described them after the eastern end of the nave (Figs. 18, 19).

Reaching the central part of the nave, at about the middle point between the royal doors and the apse, one feels the need to turn around in response to the position of the dome, which is overhead. My personal *in situ* observations included noting that upon reaching the central area, two out of five visitors (individuals, not groups or guided tours) made a complete turn, while four in five turned to observe the sides of the central nave.[129] This would explain why Procopius turned to describe the western end of the nave (Figs. 20a, b). Having described both ends of the nave, Procopius detailed the vaulting system so as to end his description of the interior space with a note on the dome (Figs. 21a, b).

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[128] Mainstone described the architecture of Hagia Sophia in ch. 2: 'The Church Today: Exterior and Interior' by looking at 'what can readily be seen by an observant visitor, approaching form a distance, walking round it, entering and mounting finally to the heights levels.' Mainstone, *Hagia Sophia,* pp. 21-65. My observations were conducted during six days in September 2008 in the mornings and the afternoons and repeated during five days in May 2009.

[129] I could observe how people, large groups and individuals, responded to architecture during the opening times, especially when the museum was closed to the general public, but allowed private, guided groups.

The *ekphrasis* of Hagia Sophia continued with an account of the manner (*tropos*) in which the main piers were constructed (50-54) and with a brief note on the decorations of the spaces he had just described (Fig. 22). Procopius next shifted his attention to the side aisles (two stoa-like colonnades) and galleries, describing them very briefly (Figs. 23-25). The description of these spaces ended with a short remark on their decoration (Figs. 26, 27). From the main nave, the side aisles are only partly visible and their geometrical attributes (shape, size etc.) are consequently intuited rather than spatially experienced. They are accessible from the nave through an arcaded colonnade between the main piers, through exedras, and from the barrel vault passages in the western secondary piers in a north-south direction (Figs. 28, 29). Procopius claimed that the aisles were not separated in any way from the nave, as they contributed to the total width of the church. In other words, the church was not confined to the central nave. He pointed out that the only difference between the aisles and nave was their height. He said nothing of the different appearance of the aisles and their complex spatial arrangement. In most basilicas, the aisles mirror the geometry and the spatial experience of the nave on a smaller scale. In Hagia Sophia, they look like a succession of bays and their spatial experience is quite different from that of the nave.[130] The main piers, in fact, belong to the space of aisles and they are supported by a counterpart bulk of buttress piers.[131]

This comparison between how the spatial organisation of Hagia Sophia is generally understood and Procopius' account shows the extent to which he integrated visual observations, such as first impressions, into his *ekphrasis.* Although his account contained a collection of first-hand visual vistas, they are juxtaposed with other views ordered in pairs, such as the end and west sides of the nave, in order to expose the overall spatial layout. Because Procopius ordered the description of the side aisles and their decorations after the structural components of the central nave and the decoration, his description becomes more than just an account of the rationalised experience of viewing the church.

More specifically, as I shall now go on to argue, Procopius' description is more akin to the exploration of the spatial layout of Hagia Sophia than to an account of the encounter with the building, in which the church is described in an ordered sequence, as it is viewed along vistas. To read an architectural space requires a rationalisation of

[130] Mainstone, *Hagia Sophia*, pp. 46-47.
[131] Ibid., p. 46.

the spatial experience of the building and a summary of the architectural configurations, and this can happen only after all spaces have been perceived and related to each other. In contrast, to encounter a building requires a low level of spatial relatedness, only an awareness of the visual sequences of viewing spaces and surfaces as one walks through a building. In this light, *periegesis* carefully records the chronological progression of the features seen, whereas a reading of the architectural spaces leads to an account of apparently no strict visual progression of spaces. Procopius' *ekphrasis* was focused on the interior space that the spectator experienced and explored within the church, albeit constrained by the physical layout.

Even when Procopius described a feature that was first seen when entering the church, such as the eastern apse, he supplemented details regarding its position towards the rising sun and its liturgical function, as this was the space reserved for the clergy and its symbolical meaning within the building represented 'the face' (πρόσωπον) of the church. This technique shows that his visual observations reflected his wider understanding of what Hagia Sophia was and how it was used. In light of all this, I would argue that Procopius described what I have previously termed the experienced architectural space of Hagia Sophia. His organisational principal relates closely to the reading of an architectural layout from within the interior space of the building.

In this conclusion, all rhetorical features and literary structure of Procopius' account seem to cohere. However, this reading challenges the accepted view that Procopius' *ekphrasis* of Hagia Sophia, as well as Paul the Silentiary's, are accounts of the main building phases of the church (*tropos*), which can accommodate symbolic interpretations of Hagia Sophia as a human body.[132] Procopius undeniably described first the architectural elements that played a structural role in the building, such as walls, piers, and arches and mentioned their decorations last. Yet his account does not tell us much about the chronology of building operations, such as whether the main piers or the apse's walls were constructed first, elements which would make an *ekphrasis* of *tropos* (manner).[133] It contains only sporadic details on how the bricks were fastened, how the main piers were strengthened with lead and how the outline of the

[132] Macrides and Magdalino, 'The Architecture of Ekphrasis', p. 82; view accepted by Webb, 'Ekphraseis of Buildings in Byzantium', p. 25.
[133] On the planning and construction of Hagia Sophia, see Bratislav Pantelić, 'Applied geometrical planning and proportions in the church of Hagia Sophia in Istanbul', *IstMitt,* 49 (1999), pp. 493-515.

circular recesses was achieved. Furthermore, Procopius' application of personification was inconsistent in his *ekphrasis*. He identified the projecting apse located on the eastern side of the nave as 'the face' (τὸ πρόσωπον) of the edifice, but did not say what might represent the body or the arms. However attractive personification can be, it is difficult to envisage an entire human body represented in Hagia Sophia by Procopius. His bodily imagery works when it is seen in relation to the utilitarian function of the apse as containing the altar or the area that is in front of us when entering the church: therefore, personification works in the context of the experience of an architectural space having a utilitarian function.

A conclusive evaluation of Procopius' organisational principle requires an examination of the order followed in other *ekphraseis* of churches in the *Buildings*. Procopius commenced most of his descriptions with details of the interior space.[134] In many cases, he concluded with a description of a succession of spaces, as if the observant visitor had left the church. His account of the church of the Mother of God in Jerusalem is a case in point.[135] Procopius began by saying that the edifice was supported on all sides by a stoa, apart from on the eastern side. At this point, the reader cannot be sure if Procopius was describing the interior space of the church or the surrounding buildings. Then he mentioned that on the side of the main door there were two columns, before stating that a colonnaded stoa, a narthex, had been added. Beyond the narthex, he described a court with similar columns running on four sides, leading to a monumental gateway and an arch. The latter elements were apparently orientated towards an open circular space intersected by a road. It is now clear that Procopius started the description with the interior space of the church, which looked like a basilica as it had an open inner narthex and continued outwards. It is the opposite of Eusebius' descriptive order of the church at Tyre and other Late Antique *ekphraseis* of buildings: those started with the surroundings and the atrium and then proceeded into the interior of the building.[136]

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[134] Procopius, *Buildings* I.iv.25-27 (the church of Acacius at Constantinople), V.vi.22-25 (the Church of the Mother of God at Jerusalem); the account of the Church of the Archangel at Anaplus, near Constantinople, is remarkable, as Procopius described the open court surrounding the church, but not the interior space. The focus on the exterior was perhaps prompted by the interventions on the shore line and the transformation of the sea-beach into a market. See, *Buildings* I.viii.17-20, English trans. by Dewing, *Buildings*, pp. 73-75.

[135] Procopius, *Buildings* V.vi.22-26, English trans. by Dewing, *Buildings*, pp. 347-349.

[136] See, for instance, the sixth-century descriptions of churches of Hagioi Sergios and Bakchos and Hagios Stephen at Gaza, Choricius of Gaza, *Laudatio Marciani I, II,* Greek text ed. by Richard Foerster,

These examples demonstrate that Procopius' order of describing the church of Hagia Sophia is unique. He not only reversed the Late Antique order of describing from the outside to the inside, as he did with the church at Jerusalem, for example, but he also focused solely on the interior space of Hagia Sophia. In so doing, Procopius stands out from other sixth-century writers, who still followed the classical model of moving from the outside city into the sanctuary. What is more important is the fact that the *ekphrasis of* Hagia Sophia is not built around the particulars, or *periegesis*, of the church but on the kinaesthetical experience of the interior space. The descriptive progress of this *ekphrasis* or the route by which the text moves from one place to another comes from the corresponding stages of an experienced architectural space. Procopius' *ekphrasis* does not only reflect direct visual observations of architectural features arranged in space, but also communicates closely how the architectural space was perceived and embodied. As I shall now go on to argue in the reminder of this chapter, this conclusion is all the more perspicuous because of the metaphors used by Procopius to attain a vibrant account of the church, such as the dance of columns and sudden shifts of visual foci.

1.6 'Dancing Columns' (κιόνια ὥσπερ ἐν χορῷ): The Performance of the Exedra's Columns

When Procopius described the disposition of columns, colonnades and vaults, he often personalised them with verbs of motion: columns 'make way for' (ὑπεξίστημι). His description of the semicircular recesses flanking the eastern apse is telling, as columns seemed disposed to dance:

> On either side of this are columns arranged on the pavement; these likewise do not stand in a straight line, but they [retreat] inward in the pattern of the semicircle as if they are making way for one another in a choral dance.[137]

Choricii Gazaei Opera (Leipzig: Teubner, 1929), pp. 1-47 and partial English trans. by Cyril Mango, *The Art of the Byzantine Empire*, pp. 60-72.

[137] Procopius, *Buildings* I.i.35: τούτων δὲ δὴ ἐφ᾽ ἑκάτερα κίονες ἐπ᾽ ἐδάφους εἰσίν, οὐδὲ αὐτοὶ κατ᾽ εὐθὺ ἑστῶτες, ἀλλ᾽ εἴσω κατὰ σχῆμα τὸ ἡμίκυκλον ὥσπερ ἐν χορῷ ἀλλήλοις ὑπεξιστάμενοι, English trans. by Dewing, *Buildings*, pp. 17-19. An alternative translation is: '[they] are not placed in a straight line, but arranged with an inward curve of semicircular shape, one beyond another like the dancers in a chorus'; for this, see, Lethaby and Swaison, *The Church of Sancta Sophia*, p. 25.

In this section, I will examine whether this standard metaphor could also have had a physiological basis related to the perceptions of space, forms and visual patterns. The modern-day definition of perception is based on the standard distinction between sensation and perception. According to this, sensation refers to the responses of sensory receptors to environmental stimuli, and perception is the result of the recognition and interpretation of these stimuli as they register in our senses. The process of interpretation involves giving meaning to what the sense organs initially process, whereas sensation deals with the immediate, direct experience of the qualities and attributes linked to physical environment.[138]

Visual perception is a complex process in which the senses and the nervous system transform, integrate and process stimuli from the physical world. To enable perception of the environment, and particularly of a three-dimensional (3D) space, the visual system relies on several cues. The one that provides information as to the depth and distance of objects relative to each other in space is motion parallax. This cue can create the impression that static objects move; yet it is actually the observer's movement through space, or a change in the observer's position that causes this apparent shift of objects.

In ordinary space perception, when objects are arranged at different distances relative to each other, some create a background for others or make up a layer in front of them. When an observer fixes their gaze on an object and at the same time moves tangentially to it, the objects that lie close to the line of sight of the observer do seem to move. [139] Those near to the observer appear to move rapidly, whereas more distant objects shift more slowly. Moreover, the direction of an object's movement depends on its position in relation to the observer. As a consequence, objects close to the observer seem to move in the opposite direction to the observer's movement, whereas those beyond the object seem to move in the same direction.[140] The apparent shift of images does not depend on the speed of the observer's movement. This phenomenon can be significant when an observer is within a building rather than in an open space.

Motion parallax can occur in Hagia Sophia, especially when the observer moves through the central nave and looks through the exedras and the colonnades into the side aisles. The best way to show how motion parallax happens is through computer

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[138] Harvey R. Schiffman, *Sensation and Perception: An Integrated Approach* (New York–Singapore: John Willey&Sons, INC, 2001), p. 3.
[139] Schiffman, *Sensation and Perception,* pp. 228-231.
[140] Ibid., p. 228.

simulations derived from a CAD system for a chosen route. [141] Figure 30 represents a schematic analysis of motion parallax in the east end of the church. When observant visitors move through the central nave towards the eastern apse and fix their gaze on the distant far column in the south aisle through the south-east exedra, the columns in the foreground seem to move in the same direction as the columns in the south-east aisle, between the exedra and far-distant column.

This can apply to each exedra, as the observer either walks through the central nave or the side aisles. Figure 31 shows what happens when the observer walks eastwards through the western bay of the south aisle and fixes their gaze on one of the candelabras in the nave. The columns of the western exedra and the colonnade seem to move in opposite directions. Although this might give observers the sensation that static objects that are in front of them are moving, motion parallax also conveys information about the relative distance of these objects from the visitors as they walk.

Motion perspective is another depth cue. This produces the impression of movement among static objects or the impression of a receding surface. Motion perspective refers to the optic flow of surfaces and objects laterally situated in relation to the moving observer and the fixed point.[142] When the observer moves towards the frontal surface while focusing on a point, and is at the same time parallel to surfaces, objects on all sides seem to move radially away from the focal point. Moreover, objects nearer to the moving observer flow by more rapidly than distant ones. In architecture, motion perspective occurs when the observer walks through long columned facades or nave-like columned spaces. In Hagia Sophia, this effect might occur while walking though the colonnade.

In light of this, Procopius' imagery of the 'dancing columns' is no mere literary detour or mise-en-scène. His words expressed the direct visual sensations and perceptions that one experiences within the architectural setting of Hagia Sophia.[143] Procopius resorted to his own observations in order to bring the church of Hagia Sophia alive for his readers. What might be taken as a rhetorical *topos* has a physiological basis, reflecting experienced architectural elements arranged in space.

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[141] Hill, *Designs and their Consequences,* note 24, p. 249.
[142] Schiffman, *Sensation and Perception,* p. 231.
[143] Liz James argued that rhetorical metaphors pertaining to colour also render aspects of perception; for this, see, James, *Light and Colour in Byzantine Art,* p. 89

1.7 'The Vision Constantly Shifts Suddenly' (ἀγχίστροφός ἡ τῆς θέας μεταβολὴ ἐς ἀεὶ γίγνεται): Perceptual Processing in Procopius' Account of Hagia Sophia

Thus far, this study has argued that Procopius' direct experience of Hagia Sophia is reflected in his method of ordering the material and in the way he animated his description. I now delve further into the relationship between the experience of church space and the way in which Procopius penned his *ekphrasis* of Hagia Sophia. This section therefore focuses on lines 47-49, in which Procopius described in analogical terms the unity of Hagia Sophia's design against the diversity of architectural elements, especially the dome resting on a cascade of semidomes and arches and the difficulties the behold encountered:

> All these details, fitted together with incredible skill in mid-air and floating off from each other and resting only on the parts next to them produce a single and most extraordinary harmony in the work, yet do not permit the spectator to linger much over the study of any of them, but each details leads the eye in a different direction and draws it on irresistibly to itself. So the vision constantly shifts suddenly, for the beholder is utterly unable to select which particular detail he should admire more than all the others. But even so, though they turn their attention to every side and look with contracted brows upon every detail observed are still unable to understand the skilful craftsmanship, but they always depart from there overwhelmed by the bewildering sight.[144]

The semidomes, pendentives and arches, noteworthy in themselves, compete visually with the overall spatial configuration of the church. In a phrase that can easily be taken as a commonplace rhetorical *topos*, Procopius formulated the relationship

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[144] Procopius, *Building* I.i.47-49: ταῦτα δὲ πάντα ἐς ἄλληλά τε παρὰ δόξαν ἐν μεταρσίῳ ἐναρμοσθέντα, ἔκ τε ἀλλήλων ἠωρημένα καὶ μόνοις ἐναπερειδόμενα τοῖς ἄγχιστα οὖσι, μίαν μὲν ἁρμονίαν ἐκπρεπεστάτην τοῦ ἔργου ποιοῦνται, οὐ παρέχονται δὲ τοῖς θεωμένοις αὐτῶν τινι ἐμφιλοχωρεῖν ἐπὶ πολὺ τὴν ὄψιν, ἀλλὰ μεθέλκει τὸν ὀφθαλμὸν ἕκαστον, καὶ μεταβιβάζει ῥᾷστα ἐφ᾽ ἑαυτό. ἀγχίστροφός τε ἡ τῆς θέας μεταβολὴ ἐς ἀεὶ γίγνεται, ἀπολέξασθαι τοῦ ἐσορῶντος οὐδαμῇ ἔχοντος ὅ τι ἄν ποτε ἀγασθείη μᾶλλον τῶν ἄλλων ἁπάντων. ἀλλὰ καὶ ὡς ἀποσκοποῦντες πανταχόσε τὸν νοῦν, τάς τε ὀφρῦς ἐπὶ πᾶσι συννενυκότες, οὐχ οἷοί τέ εἰσι ξυνεῖναι τῆς τέχνης, ἀλλ᾽ ἀπαλλάσσονται ἀεὶ ἐνθένδε καταπεπληγμένοι τῇ ἐς τὴν ὄψιν ἀμηχανίᾳ., English trans. by Downey, *Buildings*, pp. 21-22. Procopius' complaint is in line with other examples, pre-dating and post-dating his; see, Ruth Webb, 'The Aesthetics of Sacred Space', p. 59, esp. notes 1 and 4. This passage has been read by Mary Carruthers as a *ductus,* a termed used by Latin writers to describe *the* movement of a particular literary composition; see, Carruthers, '*Varietas*: a Word of Many Colours', *Poetica: Zeitschrift für Sprach-und Literaturwissenschaft*, 41(2009), pp. 33-54, esp. p. 35.

between the whole and the parts of the architectural object. It was unity in diversity, the harmony built from contrast of forms, colours and textures that creates aesthetic vision and at the same time sudden shifts of vision. The aesthetical allure of Hagia Sophia comes from being a poly-focal space and Procopius flagged it.[145] Although the beholder was able to create a meaningful and enduring visual representation of Hagia Sophia's architecture, the architectural forms had an irresistible effect of their own, one detail after another seizing his gaze. The diversity of architectural means prevented the beholder from admiring some elements over others. In other words, Hagia Sophia as an architectural stage did not facilitate a straight hierarchical representation of the individual architectural features. Floors and walls, columns, vaults and pendentives with their glittering or glossed surfaces, and the dome led to an aesthetic vision which was fluidly and transiently constructed whenever the beholder ventured to grasp the artistry of the building. Visitors were powerless to decide which detail they should admire and praise most.

Having established the difficult position of a beholder in Hagia Sophia, Procopius however suggested that an aesthetic judgment of the artistry of the church depended on people's ability to select individual features (47-49). This process entailed a continuous visual exploration. The verbs used by Procopius – 'linger' (ἐμφιλοχωρέω), 'lead in a different direction' (μεταβιβάζω), 'draw' (μεθέλκω), 'come to pass/shift' (γίγνομαι), and 'look' (ἀποσκοπέω) – suggest a total visual engagement with the built forms. It is perhaps worth stressing that they are either preceded or followed by verbs pointing towards their result: 'produce' (παρέχω), 'permit', 'unable' (οὐχ εἰμί), 'understand', and 'depart' (ἀπαλλάσσω). This can be clearly seen in the following passage:

> … *produce* a single and most extraordinary harmony in the work, and yet *do not permit* the spectator to linger much over the study of any one of them, but each detail attracts the eye and draws it on irresistibly to itself. So the vision constantly shifts suddenly, for the beholder is utterly unable to select which particular detail he should admire more than all the others. But even so, though they turn their attention to everywhere and look with contracted brows upon

[145] This passage clearly echoes the second-century rhetor Aelius Aristides' description of Smyrna, when the beholder standing on the acropolis saw in front of his eyes the sea and the suburbs; see, Aristides, *Smyrnaean Oratio* 17. 10.

> every detail observed are still *unable to understand* the skilful craftsmanship, but they always *depart* from there overwhelmed by the bewildering sight.[146]

When taken together with the nouns – 'spectator' (ὁρατής), 'study' (ἔργον) 'eye' (ὀφθαλμός), 'vision' (θέᾳ), 'contracted brows' (ὀφρῦς συννενυκότες) and the adverb 'everywhere' (παντᾳχοῦ)' – these verbs substantiate the physiological processes that occur when a building is aesthetically contemplated. Accordingly, Procopius' rhetorical description can be interpreted in terms of perceptual metaphors that are grounded in processes of perceptual organisation. The very words 'look,' 'examine,' 'focus,' and 'contracted brows' suggest stages of perceptual processing, especially attention to detail when examining surfaces and their intricate designs of architectural elements such as columns, colonnade, vaults and domes.

Procopius' passage can be understood in the context of 'feature integration theory.' This explains how the features of an object are perceived gradually according to different processing stages. It must first be said, however, that despite the tremendous progress made in visual space perception, and the recent research on how visual attention is directed in a 3D space, there has been little effort to apply these results to the perception and appreciation of buildings.[147] Issues such as how people spatially construct and represent the interiors of complex buildings, and how a basic layout of buildings is understood, are, as yet, mostly unconsidered.[148]

Psychologists describe visual perception as an operation consisting of two different processes, both dealing with sensory information: data-driven processes (also referred as bottom-up processes), and conceptually-driven or top-down processes.[149] Data-driven processing concerns the way in which visual information is received. Thus, data-driven processes take note of simple, basic elements provided by sensory receptors within a visual field. In contrast, conceptually-driven processing uses higher levels of analysis and thinking. Top-down processes rely on abstract levels of analysis,

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[146] All italics, bold type and underlining are mine.

[147] Zijiang J. He and Ken Nakayama, 'Visual Attention to Surfaces in Three-Dimensional Space', *Proceedings of the National Academy of Sciences of the United States of America*, 92 (1995), pp. 11155-11159; Shihui Han, Xiaoang Wan, Glyn W. Humphreys, 'Shifts of Attention in Perceived 3D Space', *Q J Exp Psychol-A* 58A, (2005), pp. 753–764.

[148] The only type of research into the perception of architectural space of which I am aware deals with the issue of orientation in buildings; see, for instance, Tommy Garhng, Erik Lmdberg, and Timo Mantyla, 'Orientation in Buildings: Effects of Familiarity, Visual Access, and Orientation Aids', *J Appl Psychol,* 68 (1983), pp. 177-186.

[149] Schiffman, *Sensation and Perception,* pp. 158-166.

such as categorisation and representation.[150] It has been proved that the human visual system can only deal with a limited amount of information and this leads to an active selection of incoming sensory information.[151] This process is accomplished through 'visual attentional mechanisms.' In this way, moving attention to an object or an area of the built environment involves the process of orientating the sensory system's activity towards specific locations wherein the source of stimulation is located. It has been experimentally proven that the non-sensory factors, such as intentions, expectations, and memory can influence attentional processes.[152] These additional factors, such as pleasant memories or smells, enable the observer to select and focus on the most relevant features and to filter out irrelevant information.[153]

Following these processes, there is an initial, 'pre-attentive', stage when exterior stimuli are extracted and analysed in order to get a meaningful representation of the conspicuous features of the visual field. This first stage entails parallel processing of all visual elements without conscious effort. The second stage, 'focused attention', requires the observer's full engagement with the elements of the visual display.[154] Although selective processing occurs mainly during the early stages of perceptual processing, it also occurs at later stages of categorisation of the selected features.[155] During the first stage the dominant process is that of visual selective attention, whereas the second stage deals with the features of the visual display already selected by observers or chosen as priorities, known as 'visual focused attention.'[156]

Recent studies have shown that these two stages do not differ qualitatively from the point of view of the required type of processing.[157] However, these two stages are distinguished by the amount of information processed and the allocation of resources (sensory system activities) to the specific locations in space during pre- and post-selection. Attention can shift in a tri-dimensional space throughout both stages,

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[150] Ibid., p. 158.
[151] William A. Johnston and Veronica J. Dark, 'Selective Attention', *Annu Rev Psychol,* 37 (1986), pp. 43-75; Ronald A. Kinchla, 'Attention', *Annu Rev Psychol,* 43 (1992), pp. 711-742; Jan Theeuwes, 'Visual Selective Attention: A Theoretical Analysis', *Acta Psychol,* 83 (1993), pp. 93-154.
[152] Johnston and Dark, 'Selective Attention,' p. 74.
[153] Schiffman, *Sensation and Perception,* p. 159.
[154] Ibid., p. 160.
[155] Jan Theeuwes, 'Visual Selective Attention', p. 94.
[156] Jon Driver, 'A selective review of selective attention research from the past century', *Brit J Psychol,* 92 (2001), pp. 53.
[157]David Navon and Dov Pearl, 'Preattentive Processing or Prefocal Processing', *Acta Psychol,* 60 (1985), pp. 245-262.

and this is extremely significant when the observer processes spatial features of tri-dimensional spaces, and ultimately of buildings. Shifts of spatial attention to specific locations within the visual field can be interpreted as a method by which data is selected for further processing.[158]

Returning to Procopius' passage, it is reasonable to state that he was aware that a church building with multiple curved surfaces and lavish decorations was rich in visual stimuli. By saying that each detail caught the attention of its beholders and attracted attention, he indicated that the architectural space was visually complex and could only be described by taking its sub-architectural entities in turn. Each architectural piece represented a source of stimulation to the sensory system: spatial forms, colours, textures, degrees of brightness, contrasts. In Hagia Sophia, the beholder was confronted with the task of grouping stimuli that shared similar features. The upper structure of the church stands out as a united group of curved surfaces (vaults, arches, pendentives, semi-domes and the dome), aided by the unifying force of gold mosaics. In contrast, the architectural features of the lower part of the building, including the galleries, compete in terms of colour. They are green, porphyry, and white marble revetments. Each architectural element, with its specific colour and texture, required different levels or degrees of attention.

Procopius expressly stated that the beholder could not decide which piece was worth admiring most. Through this assertion, Procopius indicated that visual selection was determined by the physical properties of the objects present in the visual field. Recent studies have shown that attention to specific design peculiarities plays an important role in perceptual processing.[159] Moreover, these studies have indicated that attention to a specific stimulus feature, such as colour or texture, enhances the processing of other stimuli which share the same feature. This fact indicates that objects sharing similar features can play important roles during visual searches, mainly in the process of selecting the location of the relevant stimuli. Furthermore, this attentional mechanism based on grouping features can influence later processes, such as those involving eye movements or even the observer's passage through the space, for further processing.

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[158] Antonio Torralba et al, 'Contextual Guidance of Eye Movements and Attention in Real-World Scenes: The Role of Global Features on Object Search', pp. 1-21, esp. pp. 2-4, [Retrieved August 2010] people.csail.mit.edu/torralba/publications/torralbaEyeMovements.pdf.

[159] Melissa Sàenz, Giedrius T. Buraĉas, Geoffrey M. Boynton, 'Global feature-based attention for motion and color', *Vision Res,* 43 (2003), pp. 629-637.

Additionally, Procopius seemed to be fully aware of the attentional stages required in attending to and representing the architecture setting, as he implied that attention could shift during the processing of visual stimuli.[160] Recent studies have proved that shifts of attention occur either when an important element is present in the visual field or when the beholder focuses on a specific zone of the visual field. [161] Moreover, object-based attention interacts with space-based attention and the former benefits from attention deployed to unoccupied regions of the visual field.[162] In Hagia Sophia, the dome can cause a shift in focus even though the beholder is looking at the eastern apse. Even if the dome catches the beholder's attention entirely, other architectural features can be processed regardless of object-focused attention, thus enabling the beholder to acquire a complete picture of the architectural design. Although Procopius might have not been fully aware of the flow of thought and processing of the visual stimuli by the brain, his account contains a plethora of sensations and perceptions that naturally occur in a building such as Hagia Sophia. These *topoi* need to be understood not as simply rhetorical, but as reflecting actual stages in processes of perceptual organisation.

The perceptual metaphor 'the vision constantly shifts suddenly' (ἀγχίστροφός ἡ τῆς θέας μεταβολὴ ἐς ἀεὶ γίγνεται) reflected the viewer's movements inside the church. It is only when the observer changes their position in the building that they can see more of a particular architectural form, such as a column, a vault or the dome. Viewed from different angles, columns can look different, and hence cause a change in the appearance of architectural forms. The movement that Procopius refers to might be the result of one of two processes: the beholder who is experiencing effects of the central space covered by the dome might either turn around or turn their head, in both cases for further processing. Not surprising is then the fact that later Byzantine *ekphraseis* of church buildings, while resorting to the same metaphor of motion, were keen to specify that it was the movement of the observer that made everything seem to be in motion:

> Thenceforth it seems that everything is in ecstatic motion, and the church itself is circling round. For the spectator, through his whirling about in all directions and being constantly

[160] Procopius, *Building* I.i.48.
[161] Torralba, 'Contextual Guidance', p. 18.
[162] Atchley and Kramer, 'Object and space-based attentional selection in three-dimensional space', p. 30.

> astir, which he is forced to experience by the variegated spectacle on all sides, imagines that his personal condition is transferred to the object.[163]

What then does Procopius' account tell us about the experience of the interior space of the Great Church and what did he achieve by approaching it in the way he did? Several points have strongly come to the fore in this analysis. First, Procopius' *ekphrasis* of Hagia Sophia was a direct result of his first-hand rationalised experience of the architectural space. Second, it was the reading of its spatial layout that became the organisational principle of this *ekphrasis* rather than *periegesis*. Third, the actual experience of the church played an important role in influencing the dynamics of Procopius' text. This can be followed on two levels: the way the spatial layout of the church was read and the use of perceptual metaphors to embody an experience.

Regarding the first aspect, Procopius' *ekphrasis* ordered descriptions of the visual sequences which are essential for the perception of the church in a way that suggested they were part of a centrally planned structure. According to this *ekphrasis*, the spatial layout of Hagia Sophia was read as a centralised space. As for the words used to convey how the space was sensed, perceived and embodied, these are mainly perceptual metaphors which would go some way to explaining the dance of the exedras' columns and sudden shifts of vision. His account contains a lively dynamism and part of this vitality comes from the employment of such perceptual metaphors or/and indications of perceptual processing. They serve well the purpose of *ekphrasis*, that is, to attain a vibrant account of the church. The affective and transformative speech of his *ekphrasis* is gradually built around them.[164] It can be safely concluded that Procopius' perceptual representation of Hagia Sophia offers a valuable insight into how the aesthetic value of this church was experienced in the sixth century.

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[163] Photios of Constantinople, *Homilies* X.5.4-5: Δοκεῖ δὲ λοιπὸν ἐντεῦθεν τά τε ἄλλα ἐν ἐκστάσει εἰναι καὶ αὐτὸ περιδινεῖσθαι τὸ τέμενος· ταῖς γὰρ οἰκείαις καὶ παντοδαπαῖς περιστροφαῖς καὶ κινήσεσιν, ἃ πάντως παθεῖν τὸν θεαρὴν ἡ πανταχόθεν ποικιλία βιάζεται τοῦ παθημα θεάματος, εἰς αὐτὸ τὸ ὁρώμενον τὸ οἰκεῖον φαντάζεται πάθημα., Greek text ed. by Vasileiou Lourda, *Photioôu Homiliai : Ekdosis keimenou, eisagôoge kai scholia* (Thessalonike: [n. pub.], 1959), pp. 23-33 and English trans. by Mango, *Art of the Byzantine Empire,* p. 185.

[164] For a similar affective and transfiguration type of thought, but used in Christian miracle stories, see Giselle de Nie, 'Word, Image, Imagination in the Early Medieval Miracle Story', in *Langage et ses au-delà. Actualité and virtualité dans les rapports entre le verb, l'image et le son,* ed. by Paul Joret and Aline Remael (Amsterdam, Radopi, 1988), pp. 96-122.

CHAPTER TWO

The Experienced Architectural Space of Hagia Sophia: Paul the Silentiary's Account

Introduction: Approaching Paul the Silentiary's Ekphrasis of the Church of Hagia Sophia (Εκφρασις τοῦ ναοῦ τῆς ἁγίας Σοφία)

In the previous chapter, I examined how the spatial perception of Hagia Sophia affected Procopius' *ekphrasis* of this building. His text ordered descriptions of the visual sequences which are essential for the perception of the church in a way that suggested they were part of a centrally planned structure. I concluded that, according to Procopius, the spatial layout of Hagia Sophia could be read as a centralised space. This observation is crucial to an understanding of how the Byzantines might have experienced Hagia Sophia in the sixth century and how they perceived of church spaces. It is now necessary to ask whether Procopius' description of the spatial design of the church was consistent with other sixth-century accounts of Hagia Sophia. To answer this question, I now turn my attention to Paul the Silentiary's *Ekphrasis of the Church of Hagia Sophia.*[165]

Paul the Silentiary's description is a long poem of 1129 lines with no strophic structure; it consists of speech-oriented parts in iambic trimeters and epic narratives in hexameters. It was considered by Paul's contemporaries as a literary masterpiece. Agathias, *rhetor* and historian, claimed that the description displayed toil, and

[165]For the Greek text, I have used Paul Friendländer's edition. A new edition of the Greek text was published too late for me to use it in this thesis: Paulus Silentiarius, *Descriptio Sanctae Sophiae. Descriptio Ambonis* ed. by Claudio De Stefani, [TB ed.], (Berlin-New York: De Gruyter, 2011). There is no full English translation of Paul the Silentiary's *Ekphrasis of the Church of Hagia Sophia.* Peter N. Bell translated the prologue and epilogue, i.e., lines 1-354 and 921-1030, in *Three Political Voices from the Age of Justinian,* pp. 189-212, leaving aside the main body of the *ekphrasis*, lines 355-920, as he thought it was being translated by Cyril Mango in *The Art of the Byzantine Empire 321-1453,* pp. 80-91. However, Mango discarded passages which seemed to be irrelevant from an architectural point of view, such as lines 360-362, 411-416, 434-437, 497-505, 511-532, 601-604 and 890-920. I translated the omitted lines and re-worked Mango's translation intermittently. In reading Paul the Silentiary's *Ekphrasis*, I have used German, French and Italian translations: German trans. by Otto Veh, 'Beschreibung der Kirke der Heiligen Weisheit', in *Prokop: Bauten* (Darmstadt: Wissenschaftlische Buchgesellschaft, 1977), pp. 306-359; French trans. by Marie-Christine Fayant and Pierre Chuvin, in *Description de Sainte-Sophie de Constantinople par Paul le Silentiaire* (Drôme: Ed. A Die, 1997), pp 55-129; Italian trans. by Maria Luigia Fobelli, in *Un tempio per Giustiniano: Santa Sofia di Costantinopoli e la Descrizione di Paolo Silenziario* (Roma: Viella, 2005), pp. 34-97.

refinement and knowledge.[166] His remark should be understood in the context of the shared Classical literary experience and eloquence that unified the Byzantine society in the sixth century.[167] Justinian commissioned Paul's poem for the festivities related to the second dedication of the church of Hagia Sophia, which lasted from the actual ritual of consecration on 24th December 562 until the feast of Epiphany on 6th January 563.[168] The re-dedication of the church followed a four-year rebuilding campaign, with major interventions on the shape of the dome that had fallen down during the consolidation work of the eastern arch in May 558. The damage to the eastern part of the church was caused by an earthquake that struck Constantinople in December 557.[169] It was performed in front of a select audience of dignitaries, in the imperial palace and the patriarchal residence, between Christmas and Epiphany, probably on the first Sunday after Christmas.[170]

My reading of the text aims to examine how the author described the architectural features of Hagia Sophia and its interior and how he ordered his description. This exploration will enable me to deepen my analysis of how the Byzantines made sense of Hagia Sophia's spatial configuration. It will also help in the discussion of whether spatial form was experientially relevant when describing buildings in Early Byzantium. To this end, I will look at the order in which Paul the Silentiary presented the church and the manner in which the interior space was

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[166] Agathias, *Histories* V.9.7: πλεῖστα ποιήματα μνήμης τε ἄξια καὶ ἐπαίνου δοκεῖ δέ μοι τὰ ἐπὶ τῷ νεῳ̣ εἰρημένα μείζονός τε πόνου καὶ ἐπιστήμης ἀνάπλεα καθεστάναι, ὅσῳ καὶ ἡ ὑπόθεσις θαυμασιωτέρα.; Greek text ed. by Rudolfus Keydell, *Agathiae Myrinaei Historiarum Libri Quinque,* [CFHB 2nd edn] (Berlin: Walter de Gruyter, 1967), p. 175 and English trans. by Joseph D. Frenda in Agathias, *The Histoires* [CFHB, 2A] (Berlin–New York: Walter DE Gruyter, 1974), pp. 144-145.

[167] Peter Brown, 'Paideia and Power', in *Power and Persuasion in Late Antiquity: Towards a Christian Empire* (Madison: University of Wisconsin Press, 1992.), pp. 35-70, esp. pp. 38-40; Wolfgand Liebeschurtz, 'The Use of Pagan Mythology in the Christian Empire with Particular References to the *Dionysiaca* of Nonnus', in *The Sixth Century*, ed. by Pauline Allen and Elizabeth Jeffreys, pp. 75-91, esp. pp. 75-76.

[168] The only source that mentions the extension, apart from Paul the Silentiary's own reference in lines 74-80, is the late and unreliable, eighth/ninth century *Diegesis or Narratio de S. Sophia* 27.9-11; Greek text ed. by Theodor Preger, *Scriptores Originum Constantinopolitanarum* (Leipzig: B. G. Teubner, 1901-1907; repr. 1989), p. 105. Mango provided no translation of these lines in his *Art of the Byzantine Empire.* Paul the Silentiary, *The Ekphrasis* 74-80: 'For when you were celebrating the festival, as was fitting, immediately all the people, the senate and those who pursue the safe middle way of life, begged you to extend the days of the festival; you agreed; the days run out, they begged again, again you agreed. By doing this repeatedly, you richly extended the festival', English trans. by Peter Bell, *Three Political Voices,* p. 193.

[169] For the earthquake: Agathias, *Historiae* V.3.1-V.9.9; for re-dedication on 24th December, see *Chronicon Paschale 284-628 AD:* 563. indiction 11, p. 136.

[170] For the Sunday after Christmas, see Macrides and Magdalino, 'The Architecture of Ekphrasis', pp. 65-67; Mary Whitby, 'The Occasion of Paul the Silentiary's Ekphrasis of S. Sophia', *CQ,* 35 (1985), pp. 215-228, esp. p. 216; for Epiphany, see Friedländer, *Johannes von Gaza und Paulus Silentiarus*, p. 110. The church as a place for the recitation of the poem was suggested by Lethaby and Harold Swainson, *The Church of Sancta Sophia,* p. 34.

described. The latter issue is relevant because at a very basic level, representations of space in language depend on the same processes that govern people's physical perceptions of space.[171]

It has more than once been suggested that the *Ekphrasis of the Church of Hagia Sophia* ought to be read as a whole, giving equal importance to the panegyric-ideological parts and the proper architectural description of the church.[172] It seems that this suggestion asserts that church architecture in general, and Hagia Sophia in particular, played an important role in the flattering picture Paul aimed to paint of Justinian. Because of the limited scope of the thesis, I do not delve into the relationship between rhetoric and imperial ideology or discuss how Hagia Sophia as a sacred space was an imperial act. Instead, I focus on the proper architectural *ekphrasis* and the experience of the architectural space of Hagia Sophia. In the first part, I will examine how Paul ordered his description, what he included and excluded, and what kind of description his *Ekphrasis* provided: one that was kinaesthetically rendered or symbolically and hierarchically constructed. Next, I will consider how Paul represented the church space and spatial relations from a linguistic point of view, with the aim of seeing how he defined the spatial boundaries of the church.

2.1 Spatial Experience and the Order of Describing Buildings

Similarly to Procopius, Paul began his description of the spatial layout of Hagia Sophia with the east end of the nave. However, Paul treated the eastern part as a compact block between the floor level and the main eastern arch, whereas Procopius started with the eastern apse and then described the adjoining columnar exedras. The entire eastern block is visible from the nave. In contrast to Procopius's bottom-to-top

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[171] See also, David J. Bryant, 'Representing Space in language and Perception', *Mind and Language,* 12 (1997), pp. 239-264. For representation of space in Late Antique literature, see Ron Newbold, 'Space and Scenery in Quinytus of Smyrna, Claudian and Nonnus', *RAMUS: Critical Studies in Greek and Roman Literature,* 10 (1980), pp. 53-68; Jack Lindsay, *Leisure and Pleasure in Roman Egypt* (London: Frederick Muller Limited, 1965), esp. chapters 19 and 20: 'The Dionysiac World' and 'World within World', pp. 359-395.

[172] Macrides and Magdalino, 'The Architecture of Ekphrasis', pp. 54–67; Vessela Valiavitcharska, 'Imperial *Adventus* and Paul the Silentiary's *Ekphraseis of Hagia Sophia and Its Ambo*', *Scripta and e-Scripta,* 3/4 (2005/06), pp. 183-198. The common practice is, however, to focus on the ideological side of the poem and its place in the rhetoric of Justinian, see, for instance, Mary Whitby, 'The Vocabulary of Praise in Verse Celebrations of Sixth-century Building Achievements: *AP* 2.398-406, *AP* 9.656, *AP* 1.10 and Paul the Silentiary's *Description of St Sophia*', in *Des Géants à Dionysos: Mélanges de mythologie et de poésie grecques offerts à Francis Vian* ed. by Domenico Accorinti and Pierre Chuvin (Alessandria: Edizioni dell'Orso, 2003), pp. 593-606.

order of describing architectural features, Paul firstly stressed the 'triple-crested head' in the middle part of the entire zone (Fig. 32). Thus, the eastern component of the church was described as one spatial unit made of three conches, resting on semi-circular recesses – triple spaces of circles cut in half – and unified under the larger semi-dome (352-359). Then Paul described the individual features of the east end, starting again with the middle semi-circular recess, the eastern apse, followed by the curved columned recesses. He detailed the apse by explaining how the steps of the synthronon were arranged and how the conch was followed by an arch supported on a double pier, in lines 361-372 (Fig. 33).[173]

Paul then moved on to the columnar exedras that flank the apse in an angle outwards, to the west side of the church (373-387) (Figs. 34-35). He described them from bottom to top, although he reversed the order to describe fields in between, such as the spaces between the two storeys of the exedras (374-380). The curved columnar exedras billowed out towards the corners of the aisles, increasing the space in front of the apse and bema. In order to make clear that the exedras are not aligned with the eastern apse, but make an angle onwards to the lateral sides of the nave, Paul relied on the imagery of a human body's bent arms stretching out ready to embrace whatever was in front of it. In the case of Hagia Sophia, this was the platform for the choir (374-376). Paul mentioned that the top conches were lightened by porphyry columns arranged in a circle and supporting richly decorated capitals (376-380). In between the storeys, an arcade was upheld by the twin 'overwhelming burden-columns' on both sides of the eastern apse (381-382).

Paul stated that beneath the threefold conch the knowledgeable workmen made 'arcades completed one-half' into a single whole, on which there were small columns, their capitals bound with bronze (383-385). He mentioned twice that the lower colonnade was made of monolithic shafts of porphyry from the crags of Thebes on the Nile, while the upper colonnade was made of shafts of *verde antico* quarried at

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[173] Paul, *The Ekphrasis* 369-372: Τὴν δὲ μετεκδέχεται κρατεροῖς ἀραρυῖα θεμείλοις ἐς βάσιν εὐθύγραμμος ὕπερθε δὲ κύκλιος ἄντυξ, σχήμασιν οὐ σφαίρης ἐναλίγκιος, ἀλλὰ κυλίνδρου ἄνδιχα τεμνομένοιο. English trans: 'This conch is followed by an arch resting on strong foundations, rectangular in plan and curved at the top, not in the form of a sphere, but in that of a cylinder cleft in twain'. Mango has read the 'strong foundations of rectangular shape' as referring to the bema, Mango, *The Art of the Byzantine Empire*, note 121, p. 81. However, I think that Paul referred to the double pier flanking the eastern apse. He described how the conch was bounded at its forward edge (ἄντυξ) by an arch spanning from one pier to the other, although the soffit of the arch was continuous with that of the conch and it was followed by the barrel vault which rested on the piers of the irregular shape; hence the curved arch in the form of a cylinder cleft in twain (Fig. 33).

Thessaly. Behind the arcade, Paul mentioned that the upper galleries were reserved for women. At this point, Paul specified the employment of different numbers of columns in the two-storey arcaded colonnade. While at the ground floor there were only two columns, at the upper level the number was six, which meant the upper colonnade lacked any correspondence to the lower one (Fig. 36). Paul completed his description of the east end of the church by mentioning that the interspaces between the upper columns were supported by slabs of marble of a height that reached just above the waistline, enabling women to rest their elbows on them (395-397) (Fig. 37).

Unfortunately, the lines detailing the difference between the two-storey exedras are not clear, which leave room for alternative translations.[174] What Paul may have meant to say was that the ground floor columns appeared taller, although they were actually shorter, than the upper ones as they were placed on white marble pedestals. Because there were fewer columns at ground level, there was actually a wider intercolumniation than above. At the same time, these lower columns were thicker than the upper ones and had wider spandrels. Paul stressed that the upper columns seemed to rest on air, as there was no real congruity between these two levels. If the upper colonnade had double the number of columns of the ground floor, a visual and structural analogy would have been established. Hagia Sophia's exedras seemed to make one of the innovative features of the edifice, which was based on the interplay of width, height and different intercolumniation in two storeys, and Paul took pains to describe them as clearly as possible. Previous descriptions of colonnades in semi-circular recesses of pagan temples, such as exhibited at the Tychaion of Alexandria, were in fact less complex than Hagia Sophia's.[175] It is also worth remembering that Procopius was very brief in his description of exedras and only mentioned their disposition as evoking a choral dance.

Paul was very keen to stress in various places the novel character of the church design. It was perhaps the most successful way to persuade the audience that the consecration of the church was indeed special, different from so many other church dedications. Novelty and audacity were inherent in a design that contradicted the

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[174] Paul, *Ekphrasis* 381-385: κίοσι μὲν δοιοῖσιν ἀείρεται ἔνθα καὶ ἔνθα ἀμφοτέρης ἀψῖδος ἐδέθλια· τριχθαδίας δὲ ἡμιτελεῖς ἀψῖδας ὀλίζονας ἴχνεσι κόγχης ἄνδρες ὑπειλίξαντο δαήμονες, ὧν ὑπὸ πέζαν κίονες ἱδρύσαντο καρήατα δέσμια χαλκῶι.

[175] Libanius, 'Ekphrasis 25', *Libanii opera* VIII, Greek text ed. by Richard Foerster, pp. 529–531. It is also known as written by Ps.-Nikolaus, 'Ekphrasis 8,' ed. by Christian Walz, *Rhetores Graeci* I, 408.11–409.29, English trans. by Craig Gibson, 'Alexander in the Tychaion: Ps.-Libanius on the Statues', *GRBS* 47 (2007), pp. 431–454.

basic building rules of resting columns on columns or walls on walls. The lack of correspondence in the colonnades and exedras of the ground floor and gallery generated by different intercolumniations in the two floors challenged what the eyes were used to seeing in buildings:

> One may wonder at the resolve of the man who upon two columns has bravely set thrice two, and has not hesitated to fix their bases over empty air.[176]

Paul finished defining the east end of the nave with an extended comment on the eastern arch and the semi-dome (398-410) (Fig. 38). The latter element had already been mentioned in line 356 as 'the fourth allotted portion of the sphere' (σφαίρης τετρατόμοιο λάχος) that unified the space beneath the eastern conches. The new lines added little factual information to what had already been said. Apart from a note on the windows positioned at the base of the eastern semi-dome, these lines were superfluous. In both places, he developed the idea that the semi-dome rested on three smaller half-domes but in two slightly different ways. However, it can be argued that from a linguistic point of view, lines 398-410 should be valued because they show how it was possible for Late Antique writers to describe the same architectural feature in multiple ways: if not by employing a varied architectural terminology, then at least by framing it in different ways. The last six lines of the section dealing with the eastern semi-dome (405-410), introduced by the demonstrative adverb of manner 'thus' (ὥς), were intended to provide a more technical account of what was stated in the previous five-and-a-half lines (388-404). Here, Paul specified the location of the semi-dome by defining its borders from bottom to top, from the space covered by 'many curves' (πολύκυκλον) up to the high rim on which the dome, the 'divine head piece', rested. In the following lines, 405-410, he elaborated that the semi-dome stood alone (μία) at the summit of the east end, while below that were triple cavities or folds (τρισσοί κόλποι) pierced by openings at their bases.

Paul repeatedly referred to any novel feature encountered in Hagia Sophia as a 'wonder' or 'astonishment' (θάμβος). In this section, he captured the image of the eastern arch and semi-dome resting on other curved surfaces of the main apse and

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[176] Paul, *Ekphrasis* 392-394: ἔστι δὲ θαμβῆσαι νόον ἀνέρος, ὅς ποτε δοιαῖς πήξατο θαρσαλέως ἐπὶ κίοσι τρισσάκι δοιάς, οὐδὲ βάσιν κενεοῖο κατ' ἠέρος ἔτρεσε πῆξαι.

exedras as 'continuous wonder' (θάμβος ἀειδίνητον) (399). From an architectural point of view, it was a cascade of curved surfaces. The impression induced by such forms was incessant bewilderment as it seemed to be constantly in motion, ever-revolving. From a rhetorical point of view, this passage is sheer hyperbole.

It can be argued that such intended tautologies were justified by their expressive force which must have impressed Paul's initial audience in the same way as the technical information was later disguised in figures of speech and Homeric metaphors. Although all conches have at their base a ring of five windows, only the windows of the eastern semi-dome invited Paul to re-actualise the Homeric metaphor of Dawn (ἠώς) (410). What is striking in this rendering of the rosy-fingered Dawn is that in the Homeric sense Dawn was used to evoke the passage of time, whereas in Paul's dialogue the dawn was spatially used to stress the importance of light entering the church through a specific location, thus revealing the spatial physicality of Hagia Sophia.

The next architectural component described by Paul was the west end of the edifice (417-443). Like Procopius, Paul found it similar to the east end of the nave and dwelled only on its dissimilarity. The central space (μεσσάτιος χῶρος), instead of having an apse, has a tripartite portal (Fig. 39). Beyond the western extremity of the nave, that is the portal, there is access via three doors in a porch which run the full width of the church. Paul mentioned that this porch was called the 'narthex'. It is made accessible from the outside by seven gates, two of them positioned on the narrow sides of the narthex towards south and north, respectively. These lines were a thorough description, in which architectural terms were explained, spatial limits persistently defined, access and circulation rigorously pointed out and reference made to usage of space. His remark on the porch as being used by people singing David's Psalms during the night led to a theological digression (434-437) in which Paul summarised an entire chapter of dogmatic theology concerning the birth and Davidic lineage of Christ.[177]

Having detailed the east and west extremities of the nave, Paul returned to its core, the central space of the church (444-550). So far, his manner of describing the

[177] Paul, *Ekphrasis* 433-437: Δαυὶδ πρηϋνόοιο, τὸν ἤινεσε θέσκελος ὀμφή, φωτὸς ἀγακλήεντος, ὅθεν πολύυμνος ἀπορρὼξ γαστέρι δεξαμένη τὸν ἀμήτορα παῖδα θεοῖο Χριστὸν ἀνεβλάστησεν ἀπειρογάμοισι λοχείαις, μητρώιοις δ' ὑπέθηκε τὸν ἄσπορον υἱέα θεσμοῖς.English trans: 'David meek and lowly in heart, the glory of the prophets and glorious mortal whose illustrious offspring welcomed the Son of God without mother, by giving birth to Christ, the Child conceived without seed and in no knowledge of wedlock, defying the maternal laws!'

church followed a basic principle of defining clear spatial boundaries or spatial units towards east and west. Once the architectural elements that played an important structural role had been localised, Paul placed them in relation to what had already been described. Thus, spatial core was linked to the four lateral colonnaded exedras. In doing so, Paul managed to define the rectangular shape of the nave by mentioning all four corners and two opposing surfaces. The description of the central part was based on the overall impression of the central space, previously observed from all possible directions. Figure 40 summarises the elements mentioned up to this point.

Accordingly, Paul stated that the four robust piers (εὐπαγέες τοῖχοι πίσυρες) that defined the core had exposed surfaces towards the centre, while they were supported from the opposite direction by buttress-piers. Above the main piers, there were four arches, apparently of similar span. These were described as being 'measureless size like the many coloured rounder bow of rainbow' (μυριόμετρος ἐπιγναμφθεῖσα κεραίη, οἷάπερ εὐκύκλοιο πολύχροος ἴριδος ἄντυξ) and stretched into the directions of the four winds, that is north, south, east, west (457-461). As these arches rose from their piers and separated from the adjacent ones, the spaces in between were filled with curved triangles of solid masonry, which spread out, until they came together to form a circular rim (465-480). Paul emphasised the topmost cornice in a repetitive manner (481-488). However, he provided enough details regarding the building materials and techniques for outlining the upper part of the central space.

The next feature described was the dome (489-531). It was named as another wonder (θάμβος) to behold as it arose from its base in the same manner of a firmament, 'resting on air.' In these lines, Paul delivered an *ekphrasis* both of manner (*tropos*) and object (*pragma*). His explanations stretched from the exact form of the dome (σχήματα), number of windows at its base and the position of the ribs (θέσις) between the windows to the materials (ὕλαι) used for the main structure and decorations. Paul clarified that the cover of the central nave was not in the form of a sharp pinnacle, which was a shape commonly encountered in Late Antique buildings, but was very much like a sphere. Yet, he argued that it was not a perfect sphere, as it had the same shallow appearance as the firmament. The dome had its own internal structure, being made of robust arches equidistantly arranged and having alternatively

decorative bands (παλάμησιν ἀμοιβαδὸν ἔξεσεν οἴμους). Paul thought of the ribs as creating a visual image of a crescent peak on which nature ingrained its golden radiance. In rhetorical language, Paul drew attention to the entire surface of the dome, which was not carved but covered in glass tesserae. At the very top, where the ribs came together, there was a cross depicted in a circle (504-506), whereas at the bottom 40 arched windows contributed to another circle of light (510-511). The dome was a wonder not only because of its appearance, its large span and its high position in the 'immeasurable air', but also from a technological point of view. It was erected with burned bricks and no wood was to be found in the roof of this immense temple. Paul developed this basic idea in a poetic way, by saying that no mountain peaks covered in woods or simple forests of pine, fir or cypress across the empire had trees large enough to supply timber for Justinian's temple (517-526).[178]

Employing the same principle of describing first the extremities and then the spatial field in between, Paul returned to the four big arches to complete the description of the structural core of the nave (532-550). In these lines, he mentioned the architectural features in a different order to elsewhere: from top to bottom. While the eastern and western arches rested on air, that is, on the curved surface of half domes, those towards the north and south were supported by walls pierced by windows. The tympana rested on six *verde antique* columns, which delineated a structure where the women presumably had their seats. Those, in turn, were mounted on four Thessalian marble columns. Paul specified that the colonnade separated the central part of the vast temple from the neighbouring lengthy aisle of the shrine (545-547). He concluded the description of the central nave by comparing the ground floor Thessalian columns with a grove of flowers from Molossis (547-550). Figure 41 shows the order of the architectural features of the central part of the nave.

[178] The locations mentioned are the heights of Lebanon in Phoenicia and Daphne on the Orontes, Pataras, next to the Assyrian and Celtic woodcutters. Paul, *Ekphrasis* 517-526: καὶ γὰρ ἀνὴρ πολύμητις, ἀνειμένος ἴδμονι τέχνηι, ἄξυλον εὐρόφοιο τέγος τεχνήσατο νηοῦ. οὐδὲ γὰρ οὐ Φοίνισσαν ὑπὲρ Λιβάνοιο κολώνην οὐδὲ μὲν Ἀλπείων σκοπέλων ἀνὰ δάσκιον ὕλην Ἀσσύριος δρυτόμος τις ἀνὴρ ἢ Κελτὸς ἀράσσων δενδροκόμοις βουπλῆγας ἐν ἄλσεσιν, οὔ τινα πεύκην, οὐκ ἐλάτην ἐνόησεν ἐπαρκέας οἶκον ἐρέψαι· οὐδὲ μὲν οὐ κυπάρισσον Ὀροντίδος ἄλσεα Δάφνης, οὐ Πατάρων εὔδενδρος ἀνηέξησεν ἐρίπνη, ἥτις ἀπειρεσίοιο τέγος νηοῖο πυκάσσηι. English trans: 'In fact, the shrewd builder with expert craft made no wooden roof for the temple's beautiful top as neither in the Lebanese heights in Phoenicia, nor in the shady woods of mountain peaks, the Assyrian woodcutter or the Celtic one hatchetting the dark wood forests, saw pine or fir big enough to crown the building. Not even the covered peaks that make the forests at Daphne on the Orontes and trees of Patara which grow cypress were able to cover the immense temple.'

Having sketched the spatial core of the building, Paul, like Procopius, continued his description with the outer structure of the church: the aisles and the adjacent spaces (550-616). For the description of the remaining spaces, Paul started with the middle section of the aisles, using the Thessalian columns previously described as a spatial point of reference. He mentioned a cluster of four free-standing columns of the same type of marble, yet shorter than those of the central nave colonnade, which were placed in facing pairs in each bay. Close to the columns of the north aisle, a door led to the baptistery. On other side of the Thessalian columns in the aisle there were arched passages which opened towards north and south into other spaces via doors. There were pillars and two columns placed close to the doors towards the east and west. Figure 42 shows Paul's architectural sequences. The south aisle is similar to the north one apart from the enclosed space for the emperor, *metatorion*. The description of the top level, the galleries was brief. The section above the narthex was described in line 588 as 'is not like the other two' (ουκετι δοιαις ίση ταις ετερησιν), although Paul did not specify how. The description of the aisles is very technical and Paul considered them as transitional spaces for circulation and doors (Fig. 42).

Paul mentioned the atrium in great detail. It was the last component of the collection of spaces of Hagia Sophia that he described (Fig. 43). Its account began on the west side of the nave (590-616). Paul conceived of the atrium as an enclosed space made of aisles or porticos, with one side joined to the narthex of the church. At the centre of the court, he mentioned the existence of a large fountain, which gave him the opportunity to develop a poetical theme of the benefits of the running water. According to him, the freshness of the water testified to the power of God. The stone slabs covering the walls of the atrium and the narthex were arranged in such a manner that their natural veins formed various patterns, and those made Paul consider their resemblance to the art of painting (608-611). Paul brought his *ekphrasis* of the structural elements to an end with a note on the outer boundaries of the church, albeit in general terms: the open courts that surrounded the church were 'everywhere, along its sides and extremities' (ἔνθα καὶ ἔνθα περὶ πλευράς τε καὶ ἄκρας).

2.2 Readings of the Spatial Layout of Hagia Sophia

The order in which Paul described the basic layout of the church was similar to Procopius', although Paul's account differed considerably at the level of detail and the manner in which the spatial borders were defined. Like Procopius, Paul approached the interior space of Hagia Sophia as consisting of two basic spatial units: the inner and outer shells (Fig. 44). Both writers first described the inner shell of the church, the nave, and subsequently the outer shell of the church made of side aisles. The description of the nave was ordered according to the transversal axis of symmetry but observed along the longitudinal axis looking east. Both writers began with the eastern part, turning to the western part to close their descriptions of the nave with its central core. Procopius treated the aisles and galleries as the outer shell, whereas Paul included the inner narthex into the enveloping spaces. Paul also described the atrium and mentioned the existence of the surrounding open courts, while Procopius only referred to those spaces resorting to a rhetorical question.

It seems that Paul's architectural description was largely consistent with Procopius'. However, the parallels between their descriptions of the interior space of Hagia Sophia end here. As I stressed in the previous chapter, Procopius' description reflected the experience of exploring the spatial layout of Hagia Sophia: looking east down the longitudinal axis and moving about the church. It was determined by the experiential order of the interior space observed from within the building and greatly influenced by both subjective factors, such as slight deviations from the imposed longitudinal space of the nave and actual architectural features that facilitated or restricted movement in the church, such as colonnades, doors or plain walls.

In contrast, Paul's *ekphrasis*, while developed along the same pointers, does not contain the same level of kinaesthetic information as Procopius' experientially ordered account. Paul described the architectural features as if they were examined from all directions and ordered them in a systematic way that did not allow room for arbitrary views and pathways. There was no sense of the spectator's physical movement, kinaesthetic pleasures or subjective impressions, apart from wonder, and no architectural features seemed to have moved for him. The only architectural element which seemed to be an 'ever-revolving' (ἀειδίνητος) structure, and thus a wonder to look at, was the semi-dome of the east end of the nave. However, Paul's choice of this

adjective says more about his literary indebtedness to Nonnos and perhaps points to a celestial imagery than to any ecstatic motion.[179]

Paul rigorously specified the location of architectural elements according to left–right front–back, dawn–dusk and north–south. His way of describing looks as if he had a drawing of the church in front of him.[180] A plan summarises an ordering of individual and grouped directions and thus facilitates the formation of a mental spatial model of the building.[181] As a result, the spatial array to be represented is already organised. *Ekphrasis of the Church of Hagia Sophia* seems a translation in words of the mental plan of the building, as Agathias rightly claimed:

> In it will be found the ordered plan of the building described in great detail, whilst the various types of marble are surveyed and scrutinized with the exquisite subtlety of a connoisseur. The perfect balance of structural and visual requirements achieved in the building of the porches, the sizes and heights employed in the construction of the whole edifice, the interplay of rectilinear and circular figures, of arches and pendentives, the lavish use of gold and silver in the decoration of the tabernacle, all these features [of Hagia Sophia] and any others worth noting, whether great or small, are described in the poem and are presented as clearly and as vividly to the reader as they would be to the most observant and assiduous of visitors.[182]

Paul paid attention to numerous details, such as building materials, structural issues, the outlines of shapes and the interplays of rectilinear and circular forms. All of these were punctiliously discussed, studied and made explicit, sometimes as a recurring theme. His description conveyed a weighty sense of hierarchised spatial experience. This makes it essentially hierarchical. Yet his order was not determined by

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[179] ἀειδίνητος is not a common word. In *Dyonisiaca,* the god of stars and planets, Astra studied the future be means of round revolving sphere, an image of the sky (εἰκονικός κόσμου); see, Nonnos, *Dyonisiaca* VI.63-90, esp. 86, Greek text and English trans. by W. Rouse, [Loeb ed.], vol. 1 (London-Cambridge: Heineman and Harvard University Press, 1962), p. 217.

[180] The sense of order that characterises Paul's description made Lethaby and Swainson claimed that 'it must have been written within its walls.' See, Lethaby and Swainson, *Sancta Sophia,* p. 34.

[181] For research on spatial frameworks when the observer is within and outside the scene to be described, see David Bryant, Barbara Tversky and Nancy Franklin, 'Internal and External Spatial Frameworks for Representing Described Scenes', *J Mem Lang,* 31 (1992), pp. 74-98.

[182] Agathias, *Historiae* V.9.8: εὑρήσεις γὰρ ἂν ἐν αὐτοῖς τὴν ὅλην τῆς θέσεως εὐκοσμίαν καὶ τὰς τῶν μετάλλων φύσεις λεπτότατα κατεξητασμένας τῶν τε προτεμενισμάτων τὸ εὐπρεπὲς ἅμα καὶ ἀναγκαῖον μεγέθη τε καὶ ὑψώματα καὶ ὅσα ἰθύγραμμα σχήματα καὶ ὅσα κυκλικὰ καὶ ὅσα ἐκκρεμῆ καὶ προτεταμένα, γνοίης δὲ ἂν ἐκ τῶν ἐπῶν καὶ ὅπως ἀργύρῳ τε καὶ χρυσῷ τὸ ἱερώτερον χωρίον καὶ τοῖς ἀπορρήτοις ἀποκεκριμένον πολυτελέστατα καταπεποίκιλται, καὶ εἴ τι ἄλλο πρόσεστι μέγα ἢ ἐλάχιστον γνώρισμα, οὐ μεῖον ἢ οἱ θαμὰ ἐν αὐτῷ περιπάτους ποιούμενοι καὶ ἅπαντα διασκοποῦντες; English trans. by Joseph D. Frenda, *The Histoires,* pp. 144-145.

the importance of the architectural features, which would have required a critical appraisal of the building according to various criteria including religious symbolism. Instead, it seems to have arisen from the employment of a frame of reference or a coordinate system. A frame of reference establishes a correspondence between the physical perceived space and the cognitive space that exists in people's minds. It explains why Paul's description was considered by Agathias as easy to grasp. But what frame of reference did Paul use?

In modern scholarship on space perception, there are several frames of reference which can be used to establish a correspondence between the actual perception of space and its mental representation.[183] The first frame, bodily, also known as the viewer-centred or egocentric system, and orientates the space perceived on the axes of the human body in such terms as head–feet, left–right and front–back. The environmental frame sets the axes outside the viewer and can orientate them according to the cardinal points of north–south and east–west. The third system is object-oriented and the axes are defined by a referent object, which has an inherent top-bottom, front-back and left-right structure. Paul used predominantly the latter two reference systems to arrange his description. He started with the cardinal points: towards dawn and dusk, and the north and south winds. This frame rendered a basic sense of order, especially when the buildings elements were presented in pairs: the east and west ends of the nave or the north and south aisles. The main arches supporting the dome were positioned towards the wings of the four winds: Zephyrus (west), Boreas (north), Notus (south) and Eurus (east) (457-461).

Procopius also used the north-east and south-west frames of reference. However, what makes Paul's description unique, in contrast to Procopius' and other Late Antique descriptions, is the fact that he meticulously buttressed the references to cardinal points with a reference-object system. After pointing out the most striking architectural feature of an area, he subsequently used it as a spatial point of reference for other elements, in order to orientate his description of the remaining features or spaces. Paul's description of the east end of the nave is an especially telling example. The conches became the reference objects for the entire area. Paul described what was on top of them and newly introduced architectural features were localised in relation to these conches. Another example is the way he positioned the main piers of the

[183] For a survey, see David Bryant, 'Representing Space in Language and Perception', pp. 247-248; also, Barbara Tversky, 'Structures of Mental Spaces: How People Think about Space', *Environment and Behavior,* 35 (2003), pp. 66-80.

central nave in relation to the exedras. This object-reference frame helped Paul coalesce top-to-bottom and bottom-to-top descriptions in the same passage, without disorienting his audience. Figure 45 shows the main northern arch as the object-reference in describing the architectural elements on the central nave. It was the feature used to reverse 'bottom-to-top'.

When Paul detailed the complex successions of bays of varying size and shape in the aisles, he firstly used the object-reference system but ended the description by relying on the four cardinal directions. Thus, he started in the middle of the aisle with the cluster of the four facing piers as the spatial reference for the spaces used for circulation and the doors opposite them. He then specified what was placed opposite and next to them towards the east or dawn (ἠώς) and west (ἀμφιλύκη), towards the north wind (ἀήτη ἀρκτῷος) and the south wind (ἀήτη νότιος) or towards the day light (φάος) and the night (νύκτα).[184] By employing these two frames of reference, Paul's *ekphrasis* appears as an account of a rationalised experience of viewing this church building. Yet, Paul's account differed from Procopius'. While Procopius' text gave evidence for an architectural exploration of the spatial layout of the church, Paul's text accounted for a mental representation of space. He took Procopius' spatial experience one step further in the process of the rationalisation culminating with a description of a mental representation of space.

Despite having different ways of viewing and describing the components of the building, both writers had the same view of the defining property of the interior space of Hagia Sophia: centrality. Both made a case for Hagia Sophia as being a centrally planned edifice. A completely centralised religious space was normally associated with a martyrium in Late Antiquity; Hagia Sophia hardly resembled this. Yet, both writers perceived the design of Hagia Sophia as emphasising a spatial centre (Fig. 44). This observation is of vital importance for our understanding of how the Byzantines approached, and regarded their churches and is now worth considering. What was understood to be the spatial centre of a church?[185]

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[184] Mango claimed the entire passage describing the position of doors in the north aisles was rather confusing, as there are no doors in the south side of the aisle towards the main nave; see Paul, *Ekphrasis* 573-574: νότιον δὲ ποτὶ πτερόν, ἄντα πυλάων, εὐτύκτους κενεῶνας ἐειδομένους τινὶ παστῷ. I think Paul pointed the fact that the tunnel between the buttressing piers was closed by doors at both its extremities. This makes sense, if one applies the object reference frame used by Paul. See, Fig. 42.

[185] The question of where the centre of a centralised building is has received careful consideration from Robin Evans in his study of the relationship between geometry and architecture, thinking and imagination. However, his enquiry is confined to Renaissance and Baroque churches; see Evans, *The*

According to Procopius and Paul, the spatial centre (μέσος), or the middle of a complex enclosed space, was located beneath the dome and defined by the four piers arranged in a square on the ground floor. Procopius was precise about it: 'In the centre of the church stood four man-made crests, which were called piers.'[186] Similarly, Paul, having describing the east and west ends of the nave, paid due attention to the centre of the space of the church which was outstanding (μέσος νηοῦ χῶρος ὑπερκύδας) (445-446). Moreover, both authors considered the side aisles as adjoining spaces to the centre of the church. They described them as colonnaded *stoas* attached to the centre, which nevertheless conformed to geometry of the core: a square. Procopius stated that these aisles increased the scale of the interior, by making the great width of the nave appear more measurable and impressive in relation to them:

> ...the two stoa-like colonnades one on each side, not separated in any way from the structure of the church itself, but actually adding to the measure of its width and extending to its whole length, while their height is less than that of the building.[187]

Although the geometry of the nave seems to be an oblong, the side aisles make the general proportions of the church closer to a square. The fact that the dome is positioned in the geometrical centre of the square contributes to the perception of the interior of Hagia Sophia as a centralised space (Fig. 47).[188]

2.3 Space and Spatial Relations in Paul's *Ekphrasis*

In this section, I examine Paul's linguistic representation of architectural space and spatial relations. This investigation is crucial for a good understanding of how the Byzantines conceptualised space in an abstract way and how they thought about the

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Projective Cast: Architecture and Its Three Geometries (Cambridge, MA: The MIT Press, 1995), esp. pp. 3-52. A very useful material for establishing the visual centre versus the spatial centre is Rudolf Arnheim, *The Power of the Center: A Study of Composition in the Visual Arts,* revised ed. (Berkeley-London: University of California Press, 1993).

[186] Procopius, *Buildings* I.i.37: κατὰ δὲ τοῦ νεὼ μέσα λόφοι χειροποίητοι ἐπανεστήκασι τέσσαρες, οὕς καλοῦσι πεσσούς.

[187] Procopius, *Buildings* I.i.55-56: στοαί τέ εἰσιν ἑκατέρωθι δύο, οἰκοδομίᾳ μὲν τοῦ νεὼ οὐδεμιᾷ διειργόμεναι, ἀλλὰ καὶ μεῖζον αὐτοῦ ποιοῦσαι τοῦ εὔρους τὸ μέτρον, καὶ τῷ μήκει μέχρι ἐς πέρας συνεξικνούμεναι, τὸ δέ γε ὕψος καταδεέστεραι.

[188] For an analysis of centrality of Hagia Sophia based on Evans' theory, see Mirjana Lozanovska, 'Hagia Sophia (532-537AD): a Study of Centrality, Interiority and Transcendence in Architecture', *Journal of Architecture,* 15 (2010), pp. 425-448.

built space and the world around them. This discussion will help to establish a firm conclusion regarding the experiential relevance of the spatial form when looking at, and describing church buildings as well as when making comparisons with the natural space experienced in the sixth century.

References to space can be found in almost any Byzantine text, from poetry and rhetorical declamations to scientific, philosophical and theological treatises. Space then was understood in line with empirical observations of the surrounding environment, as well as with the literary and artistic imagination. It was defined in terms indebted to Classical Greek and Neo-Platonic philosophy and also to Judaeo-Christian tradition.[189] The Byzantines used three words in particular to convey space and its attributes, which were inherited from Greek philosophy: χώρα for space or partly occupied space, used also for land and country; τόπος meaning place or position – sometimes region – and κενός to describe a void.[190]

Of these, Paul particularly used the word χώρα to convey various meanings, ranging from a very confined enclosed space such as a room, to a surface and a zone made of objects or a space that allowed movement. Within this frame, space was thought to reveal the relationship of things. It is important to consider the fact that the relationships between objects were perceptible as well as quantifiable. Although Paul's description did not include measurements, he approached the space in between two objects as measurable and as having a middle point (μεσαῖος).[191] He also started almost all of his descriptions of specific components of the building with the elements located in the middle point of the area and then expanded outwards. For instance, Paul used the middle as a reference point for the description of both the east and west ends of the nave. At the east end, the apse had in the middle seats for the clergymen (μέση δ' ἐζώσατο θώκους μυστιπόλους), whereas the west end had the royal doors in its centre (οὐ γὰρ ἐν αὐτῆι μεσσάτιον κατὰ χῶρον). The dome was placed in centre of the building in lines 403-404 (ἧς κατὰ νῶτον πυθμένας ἐρρίζωσε μέσου κόρυς ἄμβροτος οἴκου). These examples reveal not only an understanding of space as having

[189] For an up-to-date summary of the concept of space in Byzantium, see Helen G. Saradi, 'Space in Byzantine Thought', in *Architecture as Icon: Perception and Representation of Architecture in Byzantine Art*, pp. 73-111.

[190] Keimpe Algra, *Concepts of Space in Greek Thought* (Leiden: Brill, 1995), pp. 31-71.

[191] Derivate forms: μέσος=in the middle of; μέσσατος= in the very middle; μέσσοθεν =from the middle; μέσσοθι=in the middle.

a purely relational character, but also emphasise the positional aspect and importance of the centre of things in space.

That Paul thought of space as both relational and positional can also be seen in the imagery he used to describe architectural features. When he detailed the conches of the east end of the nave, he used the imagery of a peacock unfolding its tail feathers. One might consider this imagery as a mere rhetorical *topos*. Yet it conveys the sense of spatial expansion, when looking at the east end of the nave. The interplay between mass and hollow space was particularly explored by Paul when he described the eastern exedras. He noticed that at the floor level the exedras delimitated a space because they contained objects, such as the structure for the choir, whereas at the top of the conches the eastern apse appeared as if it were the result of carving into the mass of the building. In describing exedras, Paul pointed to two ways of experiencing space and conceptions of space. [192] At floor level, he stressed that space was conceived as an empty void capable of containing things, while at the semi-dome level space was perceived as expanding outwards. In so doing, Paul emphasised that architectural forms are experientially relevant when describing buildings and can define spatial relations.

Paul's manner of describing space as both relational and as a container of things can be understood in the context of spatial theories postulated in Late Antiquity, in particular, Theophrastus' relational conception of space, which was actualised by Paul's contemporary Neo-Platonists, especially Damascius.[193] For most of his description, Paul seemed to follow a relational space theory, which postulated that general space was generated from the relative arrangement of objects. The relative position of things was in fact perceived as the origin of space. Paul diverged slightly from the relational vision of space, when he emphasised the quality of space as being filled with things. Thus, he also pointed to the view of space as an absolute reality, presumably void by nature but always filled with bodies. This was suggested by the sixth-century thinker and theologian, John Philoponos, who strictly adhered to Starto

[192] Rudolf Arnheim, *The Dynamics of Architectural Form* (Berkeley-London: University of California Press, 1977), esp. pp. 9-31.
[193] For a review of relational space, see Samuel Sambursky, *The Physical World of Late Antiquity* (London: Routledge and Kegan Paul, 1962), pp. 1-14.

of Lampasacus' concept of absolute space.[194] It can therefore be inferred that Paul's use of spatial relations reflects how space was understood in his time.[195]

2.4 The Experienced Natural Space in the Church of Hagia Sophia

Having established that Paul's description provided a mental representation of the architectural space of Hagia Sophia, I will now examine whether his description also fixed the image of the natural space or of the cosmos itself. The reader finds the highest number of comparisons with the landscape and cosmos in the lines devoted to the description of the decorative system of the church and its appearance (617-895), albeit scattered all through these lines. The floral ornaments displayed in mosaics, capitals of columns, spandrels and the soffit of the cornice (Figs. 16-22) lend themselves to comparisons with the beauty of the natural world. I shall go on to argue that Paul collated them in a complex manner which takes what seems to be a description of Hagia Sophia in naturalist terms to a different level. In what follows, I scan through the entire poem to see the context of and the purpose for using such metaphors and personifications.

A prime example of this complex collation occurs in lines 279-310, introduced by a conventional trope:

> But who could sing how, with lofty adornment, he (emperor) resorted the temple to life? Who is capable of describing the wise counsel of the wide ruling emperor, excellent in its offspring?[196]

The answer is sophisticatedly constructed around the idea that everyone can recall how the natural world is experienced and contemplated in its details. Everyone would have observed the sky with 'back-bent neck' and seen a 'circle meadow clad'

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[194]Sambursky, *The Physical World,* pp. 3-6, p. 7.

[195]There was a third unique conception of space in the writings of Proclus, who regarded space as a corporeal entity: a body. Proclus arrived at this conclusion by employing Aristotelian ways of reasoning. See for this Sambursky, *The Physical World,* p. 7; also, Sambursky, *The Concept of Place in Late Neoplatonism* (Jerusalem: Israel Academy of Sciences and Humanities, 1982); Lawrence P. Schrenk, 'Proclus on Corporeal Space', *Archiv für Geschichte der Philosophie* 76 (1994), pp. 151-167, Schrenk, 'Proclus on Space as Light', *Ancient Philosophy* 9 (1989), pp. 87-94.

[196]Paul, *Ekphrasis* 279-281: Ἀλλὰ τίς ἂν μέλψειεν ὅπως ὑψαύχενι κόσμωι νηὸν ἀνεζώγρησε; τίς ἄρκιός ἐστι χαράξαι μῆτιν ἀριστώδινα πολυσκήπτρου βασιλῆος, English trans. by Bell, *Three Political Voices*, p. 204.

with its dancing stars, the green hills with flowers and springs, a ripe corn, groves, orchards of 'coiling olive' and vineyards and seas. Paul claimed that despite the pleasure encountered in the natural world, people eventually got tired of observing and contemplating it. In contrast, this would not happen when they were gazing at the dome of Hagia Sophia. Paul relied on emotional memory, assuming that his audience had been moved by the beauty of the natural world at least once. What he achieved was an effective evaluation of the design based on the transformative aesthetical experience of both the world and the architectural object. He claimed that the observer, with 'enchanted eyes' was compelled to 'bend, twist his neck hither and hither, as all satiety has been driven from out of the lovely-helmeted house.'[197] This last detail seems to be in line with Procopius' employment of perceptual metaphors suggesting attentional processes involving head movements.

The comparison with the natural world seemed to be based on the appearance of the church and the visual and perceptual processes that occur in the human brain when the natural world is contemplated.[198] Paul asserted that the beauty of the edifice surpassed the beauty experienced in the midst of nature because the church was a flawless, everlasting delight. The purpose of such a claim was to indirectly praise the emperor, as the next thing mentioned was that the emperor had achieved all of this with the help of God and to secure the benevolence of Christ (301-302).

Naturalistic imagery was subsequently used to suggest a spiritual meaning of the church as well as to support an imperial agenda. The emperor, unlike the giants Ottus and Ephialtes who piled Mount Pelion on Mount Ossa on the peaks of Olympus to reach the heaven (as it was recalled in the *Odyssey*), did not need to use mountains to reach God.[199] Rather, the wings of piety took the emperor up to the divine firmament (310-311).

The description of the decorative revetment of the church in naturalistic terms was centred on two ideas, which constitute quasi-criteria for evaluating Hagia Sophia. The first was that the church suggested the world beyond its walls (617-681), which was introduced by another example of intertextuality:

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[197] Paul, *Ekphrasis* 298-299: εἰ δέ τις ἐν τεμένεσσι θεουδέσιν ἴχνος ἐρείσει, οὐκ ἐθέλει παλίνορσον ἄγειν πόδα, θελγομένοις δὲ ὄμμασιν ἔνθα καὶ ἔνθα πολύστροφον αὐχένα πάλλειν· πᾶς κόρος εὐπήληκος ἐλήλαται ἔκτοθεν οἴκου; English trans. by Bell, *Three Political Voices*, p. 204.

[198] For an investigation on constrains of rhetoric and visual art on depictions of nature, see Henry Maguire, 'The Realities of Ekphrasis', *BSI*, 3 (2001), pp. 7-19.

[199] Homer, *Odyssey*, 11.305ff.

> Yet who, even in the thundering strains of Homer shall sing the marble meadows gathered upon the mighty walls and spreading pavement of the lofty church?[200]

Hagia Sophia displayed a tangible magnificence of stones and metals that seemed naturalistic replicas of the world within the confines of the Byzantine Empire. The naturalism was stressed by Paul by means of personification-detours in which the entire world/Empire contributed to embellish Hagia Sophia (617-681). Thus, the bright starts besprinkled the porphyry marbles carried by river boat on the Nile. Gullies of the Iasian peaks gave glittering marbles with undulating veins. The Libyan sun chafed the scintillating golden stone, 'crocus-like' deep in the clefts of the hills of the Moors'. The Celtic crags poured milk into the church. The pale onyx had spots of snow. The hills of the Proconnesus gladly offered its rocks to provide floors for the Great Church. The gold and silver mines of Pangaeus and Sunium had opened their veins for the metal revetments. These examples serve to stress the ability of the church to incorporate naturalistic replicas which, in turn, played an important in attributing value to the edifice as it affirmed the beauty of God's creation.

The second idea was that Hagia Sophia not only encompassed the world within its walls but also accommodated natural resources, such as air and light. Although the church suggested a friendly and pleasing environment through the natural associations of its decor, the importance as a building came from the ability to magnify the natural light, the sun and the air, creating a cosmos within a cosmos. Thus, the dome was raised to such a height 'into the immeasurable air' (ἐς ἄπλετον ἠέρα) that prompted the imagery of the firmament or the vault of heaven resting on air (πόλος ἠερόφοιτος) (489, 496). The same idea was expressed by Procopius when he claimed that the golden dome suspended from the firmament (σφαίραᾳ χρυσῇ ἀπὸ τοῦ οὐρανοῦ ἐξημμένη) covered the interior space of the nave (47). It was the golden mosaic of the vaults and the marble revetments that increased the natural light in Hagia Sophia. Paul claimed the golden mosaic made the dome resemble the radiant sky (φαιδρὸς οὐρανος) (490), whilst Procopius expressively praised the abundance of sunlight and the reflections of the sun's rays on the marble:

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[200] Paul, *Ekphrasis* 617-620: Καὶ τίς ἐριγδούποισι χανὼν στομάτεσσιν Ὁμήρου μαρμαρέους λειμῶνας ἀολλισθέντας ἀείσει ἠλιβάτου νηοῖο κραταιπαγέας περὶ τοίχους καὶ πέδον εὐρυθέμειλον., English trans. by Mango, *The Art of the Byzantine Empire*, p. 85.

> Indeed one might say that its interior is not illuminated from without by the sun, but that the radiance comes into being within it, such an abundance of light baths this shrine.[201]

The same idea was expressed in a Syriac inauguration hymn composed for the dedication of the church in Edessa in the sixth century. Because of the bright, polished white marble, the church gathered light within its walls as the sun did.[202] A later anonymous Byzantine writer of an *ekphrasis* of a baptistery resorted to a rhetorical question in order to emphasise the impossibility of telling from which of the two directions the radiance in the baptistery covered by mosaics emanated: from the sun towards the tesserae or vice versa.[203] The fact that the Byzantines appreciated the golden mosaic and the marble revetments for their reflective properties, which increased the quantity of light and brought the sun into the built church, can be seen from the plethora of examples cited here.

The artificial light in Hagia Sophia was also valued for its naturalistic associations and spiritual messages conveyed. The lighting system made such a visual impact that Paul needed to back up his evaluation with a conventional trope: 'No words are sufficient to describe the illumination in the evening' (808). The lights, regardless of their locations in the building, induced a transformative experience for troubled souls, bringing joy (890-894). The diversity of light used for the illumination of the church was compared to the multitude of stars in a cloudless sky, be it isolated stars, such as the Evening Star (Venus), or those arranged in constellations, including Taurus, Bootes, Ursa Major and Orion (895-899). The starry sky performed a similar function to the lighting in the church: it transformed the darkness of the night into a smiling friend (902).

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[201] Procopius, *Buildings* I.i31: φαίης ἄν οὐκ ἔξωθεν καταλάνπεσθαι ἡλίῳ τὸν χῶρον, ἀλλὰ τὴν αἴγλην ἐν αὐτῷ φύεσθαι, τοσαύτη τις φωτὸς περιουσία ἐς τοῦτο δὴ τὸ ἱερὸν περικέχυται. English trans. by Dewing, *Buildings*, p. 17.

[202] *Another Sogitha,* English trans. by McVey, 'The Domed Church as Microcosm', p. 95. Similar ideas are found in Late Antique literature in the West; see, for instance, Lucius Apuleius, *Metamorphoses* V.1, Latin text and English trans. by William Adlington, [Loeb ed.] (London: Heinemann, 1915): "Every part and angle of the house was so well adorned, that by reason of the precious stones and inestimable treasure there, it glittered and shone in such sort that the chambers, porches and doors gave light as it had been the sun./ Iam caterae partes longe lateque dispositae domus sine pretio pretiosae totique pariestes solidati massis aureis splendore proprio coruscant, ut diem suum sibi domus faciat licet sole nolente; sic cubicula, sic porticus, sic ipsae valvae fulgurant.

[203] 'Anonymous Progymnasmata,' ed. by Waltz in *Rhetores graeci,* vol I, pp. 597-648, esp. p. 598, Greek text and French trans. by Bernard Flusin, 'Description du temple, qui, au monastère du Bapstiste, contient le basin baptismal', *TM*, 15 (2005), pp. 163-182, esp. pp. 174-175.

This evaluation marked the transition to the concluding part of the proper architectural description (904-920). Here, Paul gave his ultimate assessment of the building based on the lighting system. He used it as a metaphor for the divine light claiming that the church displayed a ray of luminous glow that enchanted people. Hence, an utterly different sky was unfolded in front of them. People could experienced inside the church a sky of delight that chased out the darkness from their souls because its raison d'être was God and the divine light (905). Because of the artificial lighting used in the church, Hagia Sophia evolved into a material beacon even for the far-distant shore of the Black Sea, guiding boatmen during the night as far as the Hellespont. However, it was not the physical light in Hagia Sophia, be it natural or artificial, which opened the way for people's ships, but the 'abundant mercy of the living God' that guided and protected them all the way through (917-920). As a whole, lighting in Hagia Sophia, emanating from the assistance of the living God, suggested the church's spiritual message of directing the faithful towards God.

My analysis has shown that Paul did not notably deviate from the main point of Procopius, both stressing the centrality of the church as a defining spatial property of the layout. However, Paul's description was not based on an exploration of the architectural layout of the church, as his text does not contain the same level of experiential information as Procopius'. The former is a hierarchical account, despite containing some references to the perceptual processing of the visual space. The investigation of the spatial frames of reference used by Paul to order his description has led me to the conclusion that his *ekphrasis* was an account of the mental representation of the architectural space. On the other hand, his description of the architectural space fixed the image of the natural space. His experienced architectural space was largely that of the natural space within the church. The naturalist imagery, in particular of the natural and the artificial light, was used to suggest the church's spiritual message.

CHAPTER THREE

Hagia Sophia as a Prop for Contemplation in Sixth-century Byzantium:Textual Evidence

Introduction: Approaching the *Inauguration Hymn* (Τῶν Ἐγκαινιῶν ὁ ὕμνος)

In the previous chapters, I looked at how Procopius of Caesarea and Paul the Silentiary described the spatial experience of Hagia Sophia in their *ekphraseis.* Their works act as an excellent introduction to the general response to the architecture and interior space of the church. I now move on to examine how the interaction between this sacred space and its users was described in theological terms. Procopius concisely expressed the theological consequences of the design when he claimed that 'the mind is lifted up toward God and exalted, feeling that He cannot be far away, but must especially love to dwell in this place which He has chosen'.[204] In saying this, he summarised Hagia Sophia's 'archi-text' for contemplation as the church was regarded as a place that God had chosen and where He loved to dwell, somewhere that induced a transformative experience of exaltation and where people felt God's presence. Notwithstanding Procopius's perceptive account of the function Hagia Sophia and its 'archi-text' for contemplation, there is no refined theological argument on why the Great Church was all this. As for Paul the Silentiary's *ekphrasis*, it did not elaborate on the Christian side of the religious message of the church. Apart from the emphasis on the system of light in Hagia Sophia as a symbol for the divine light, Paul did not engross himself in theological ideas.[205]

In contrast to these two *ekphraseis,* the hymn composed for the second inauguration of Hagia Sophia on 24 December 562 developed a theology of the church building. It is the right source to explore how the Byzantines perceived Hagia Sophia

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[204] Procopius, *Buildings* I.i.61-62: ὁ νοῦς δέ οἱ πρὸς τὸν θεὸν ἐπαιρόμενος ἀεροβατεῖ, οὐ μακράν που ἡγούμενος αὐτὸν εἶναι, ἀλλ᾽ ἐμφιλοχωρεῖν μάλιστα οἷς αὐτὸς εἵλετο, English trans. by Dewing, *Buildings*, p. 27.

[205] The only theological digression in Paul's description is on Christ's Davidic lineage and birth; see Paul, *Ekphrasis* 433-437:Δαυὶδ πρηϋνόοιο, τὸν ἤινεσε θέσκελος ὀμφή, φωτὸς ἀγακλήεντος, ὅθεν πολύυμνος ἀπορρὼξ γαστέρι δεξαμένη τὸν ἀμήτορα παῖδα θεοῖο Χριστὸν ἀνεβλάστησεν ἀπειρογάμοισι λοχείαις, μητρώιος δ' ὑπέθηκε τὸν ἄσπορον υἱέα., English trans: 'David meek and lowly in heart, the glory of the prophets and glorious mortal whose illustrious offspring welcomed the Son of God without mother, by giving birth to Christ, the Child conceived without seed and in no knowledge of a wedlock, defying the maternal laws.'

beyond its physical materiality and how they understood the function of the church building from a theological-symbolic perspective, in other words, its 'archi-text' for the contemplation of God. The text is a *kontakion* (κονδάκιον), a long metrical homily arranged in strophes, set to music and intended to be presented after the scriptural readings of the Byzantine Liturgy. It is of anonymous authorship but often attributed to a pupil of St. Romanos the Melode, and has been regarded as 'the popular counterpart of Paul the Silentiary's erudite poem' because it reached a wider audience.[206]

Although not much is known about the ceremony of dedicating a church *enkainia* (ἐγκαίνια) in Late Antiquity, it seems that in the fourth century it consisted of the celebration of the Eucharist, prayers for general peace, for the Church and the emperor, scriptural readings, the singing of psalms, panegyrics, and the distribution of alms.[207] By the sixth century, festive addresses and theological discourses were added to the elitist panegyrics addressed to the emperor or church officials. Inauguration hymns composed for church dedications soon came to stand out as a genre in their own right in an increasingly dominant Christian culture. The *kontakion* on the dedication of Hagia Sophia is the first preserved Greek liturgical hymn specifically composed for the dedication of a church. It is pre-dated by a fifth-century Syriac *madrasha* of Mar Balai Chorepiscopos on the dedication of the newly built church in the city of Qenneshrin and by the anonymous sixth-century Syriac *soghita,* on the reconstructed church of Hagia Sophia in Eddesa.[208]

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[206] Trypanis, *Fourteen Early Byzantine Cantica,* p. 139.

[207] Matthew Black, 'The Festival of Encaenia Ecclesiae in the Ancient Church with Special Reference to Palestine and Syria', *JEH,* 5 (1954), pp. 78-85, esp. p. 78. For the ritual of dedication of churches in general, and inauguration hymns in particular, see Bernard Botte and Heinzgerd Brakmann, 'Kirchweihe', in *RAC,* vol. 20 (Stuttgart: Anton Hierseman, 2004), pp. 1140-1170; Ignazio Calabuig, 'The Rite of the Dedication of a Church', in *Liturgical Time and Space,* ed. by Anscar Chupungco (Collegeville Minnesota: the Liturgical Press, 2000), pp. 333-380.

[208] 'Another Soghita/Inauguration hymn' and 'The Madrasha of Mar Balai Chorepiscopos on the Dedication of the Newly Built Church in the City of Qenneshrin', Syriac texts and English trans. by Kathleen McVey in 'The *Soghita* on the Church of Edessa in the context of Other Early Greek and Syriac Hymns for the Consecration of Church Buildings', *ARAM,* 5 (1993), pp. 459-473. The text of the Syriac *soghita* is found in two manuscripts dating to the eighth century and twelfth century, respectively. There are two German, two French and four English translations by H. Goussen, in 'Über eine 'Sugitha' auf die Kathedrale von Edessa', *Le Muséon*, 38 (1925), pp. 120-121, Alfons M. Schneider, 'Die Kathedrale von Edessa', *OC* 14 (1941), p. 161-163, André Dupont-Sommer, 'Une hymne syriaque sur la cathédrale d'Édesse', *CahArch,* 2 (1947), pp. 29-39, and André Grabar, 'Le témoignage d'un hymne syriaque sur l'architecture de la cathédrale d'Édesse au VIe siécle et sur la symbolique de l'édifice Chrétien', *CahArch,* 2 (1947), pp. 39-67, Cyril Mango, 'The Cathedral of Edessa', *The Art of the Byzantine,* pp. 57-60, McVey, 'The Domed Church as Microcosms', pp. 92-95.

The inauguration *kontakion* was transmitted in five manuscripts, the earliest dating back to the ninth century. Its title was contained in the acrostic: Τῶν Ἐγκαινιῶν ὁ ὕμνος – *Inauguration Hymn.* It was first published by Sofronio Gassisi at the beginning of the twentieth century.[209] In 1963, Constantine Trypanis, trying to solve as many linguistic and metrical problems as possible, published a new Greek critical edition of the text.[210] The English translation by Andrew Palmer in 1988 is the only one in any modern language.[211] Because Palmer's translation is sometimes too literal and deliberately introduces specific meanings, I have re-translated the entire hymn edited by Trypanis. The analysis of the text in this chapter is based on my translation.

Since the inauguration *kontakion* falls into the category of 'spiritual texts' aimed at the spiritual edification of believers, displaying a theological argument and making doctrinal issues more accessible to the Christian community, my reading of the inauguration hymn is in the manner of interpreting spiritual texts designed by Kees Waaijman.[212] He designed a hermeneutical model of interpreting spiritual works, advocating the idea that spiritual texts can reveal, when analysed in a particular way, that the ultimate purpose of the text was a transformative religious experience. Moreover, he considered that this hermeneutical model helps to not only get a better comprehension of what the text meant to its contemporary audience, the ultimate purpose for writing such a text, but also enables an understanding of the shifts in the reception of the text and its relevance across time. Scholars have already approached the *kontakion* on the inauguration of Hagia Sophia as an 'architectural *theoria*', a text that suggests the contemplation of God through the contemplation of a church building. Waaijman's methodological approach is therefore the most suitable means with which to examine Hagia Sophia's 'archi-text' in terms of divine contemplation (*theoria*).

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[209] Sofronio Gassisi, 'Un antichissimo 'Kontakion' inedito', *Roma e l'Oriente*, 1 (1911), pp. 165-182, also Idem, *Un antichissimo 'Kontakion' inedito ed un innografo anonimo del sec. VI* (Grottaferrata: Tipografia Italo-Orientale S. Nilo, 1913).

[210] Trypanis, *Fourteen Early Byzantine Cantica,* pp. 141-147.

[211] Andrew Palmer, 'The Inauguration Anthem of Hagia Sophia in Edessa: a New Edition and Translation with Historical and Architectural Notes and a Comparison with a Contemporary Constantinopolitan Kontakion', *BMGS,* 12 (1988), pp. 158-164, esp. pp. 140-144.

[212] Kees Waaijman, *Spirituality: Forms, Foundations, Methods* (Leuven-Paris-Dudley, MA: Peeters, 2002), pp. 691-771.

Waaijman's method of analysis has six levels. Level one involves an exploration of the literary genre of the text in order to determine the basic purpose of the text and its audience. The reason for writing such texts could have been merely to clarify matters of faith or dogma. It is therefore vital to understand how the author addressed the subject matter and how the work might have been received and understood by their contemporaries. The idea of audience receptiveness is important because it indicates the extent to which congregations were acquainted with complex theological concepts. The second level is an examination of the way in which the text was composed, and how its various parts related to the main theme of the work in order to reveal the basic theological ideology being developed. In my analysis, I replace this level with the translation of the *kontakion.* Level three deals with how the content of the text was articulated in 'clusters' of words and 'fields' in order to make more explicit the theological themes. Level four examines how the 'depth structure' of the text is revealed when one looks at how meanings are shaped. At this level, the analysis focuses on the relationship between certain words, symbols or metaphors and what these stand for or denote. Level five concerns intertextuality. It assumes that the text analysed does not stand alone, but in relation to other texts, thus the meanings proposed are inter-related. This analysis does not only help to locate the meaning of the text in its literary-historical context, but also helps the modern reader to make sense of, and interpret, the text, at least in part, in the same light as the sixth-century audience would have done. The sixth and final level of analysis, 'text pragmatics', looks at the dynamic of the text and its relevance beyond the meanings intended by the author and the extent it can be comprehended nowadays.

3.1 The Inauguration *Kontakion* as a Literary Genre

A discussion of the genre of this text is necessary because it indicates how the author has addressed the subject matter, how the hymn might have been received and understood by its contemporaries, and how the text is to be approached by modern readers. It shows the extent to which the faithful could manipulate dogmatic issues and were acquainted with specific ways of theological reasoning. As a sung sermon, the *kontakion* developed during the sixth century in Byzantium, and its name has been closely linked to Romanos the Melode, who refined the genre and composed many of

the *kontakia* still used in church services today.[213] The stanzas of a *kontakion*, of which there are usually 18 to 30, are organised in an elaborate and complicated strophic system. A *kontakion* opens with a prelude or prooemium, formed of one or two stanzas, to indicate the general approach to the scriptural or festal topic. The final lines of the prooemium normally introduce the working formula of the refrain. The refrain offers the opportunity for the congregation to participate in the performance by chanting the repeated phrases at the end of each stanza.

The stanza of a *kontakion*, the *oikos,* consists of a series of lines, usually from six to 16, arranged in a metrical or musical pattern that is repeated, with minor variations, throughout the entire *kontakion*. Each stanza tends to follow the pattern of the first stanza, having the same number of lines with the same number of syllables retaining the position of word accents in each corresponding line. Sometimes entire fragments of lines will be repeated within the general pattern. The acrostic signals either the title of the *kontakion* or points to the author's name. A *kontakion* usually concludes with one or two stanzas, in which the scriptural message is summed up or a practical moral lesson dispensed. It also contains a plea for divine help.

Kontakia were usually composed for fixed or movable feasts throughout the liturgical year. Their themes related to important events of the New Testament or centred on Old Testament characters whose exemplary faith was considered as vital to inspire believers. The language of *kontakia* is poetic, but it does not aim to emulate Classical Greek poetry. Nevertheless, *kontakia* can contain wordplay of all sorts, including antitheses, anaphoras, parallelisms and metaphors, in order to accentuate the catechetical effect, as they were composed to appeal to, and be immediately comprehended by, a mixed audience. The vocabulary and syntax were strongly influenced by the Septuagint version of the Old Testament and the language of the New Testament.

Scholars have pointed out that *kontakia* share common features with Syriac poems such as: an acrostic, a refrain, a dramatic scriptural recasting, dialogue, word-

[213] The discussion on the genre of the *kontakion* is indebted to the following materials: Hans-Georg Beck, *Kirche und theologishe Literatur in byzantinischen Reich* (Munchen: Byzantinisiches Handbuch, 1959), pp. 262-266; Joost van Rossum, 'Romanos le Melode et le 'Kontakion', in *L'Hymnographie. Conférences Saint Serge. XLVIe Semaine D'Étude Liturgiques*, ed. by Achille M. Triaccan and Alessandro Pistoria (Rome: CLV-Editioni Liturgiche, 2000), pp. 93-104; José Grosdidier de Matons, *Romanos le Mélode et the origins de la poésie religious à Byzance* (Paris: Editions Beauchesne, 1977).

accent metrics and verse homilies in a series of stanza.[214] Yet, *kontakia* cannot be regarded as directly appropriated from Syriac hymnology. The rhetorical and exegetical elements that constitute the original features of the *kontakion* are indebted to the New Testament and Patristic Greek literature. It is, however, within *kontakia* that Syriac technical aspects are combined with Greek tonal elements, unified and refined to create a unique form of liturgical poetry, namely the sung sermons. One aspect which is worth emphasising is that the theological ideas developed in *kontakia* have reached a wider audience throughout time, as *kontakia* have always been sung in the Byzantine Church tradition. With regards to the sixth-century inauguration hymn of Hagia Sophia, its importance and impact can be discerned from the fact that this hymn was performed at other church consecrations, thus constantly reiterating the sixth-century theology of church spaces.[215]

3.2 Inauguration Hymn of Hagia Sophia – English Translation

Prooemium:

As You have shown the splendour of the firmament above and the beauty of the holy abode of Your glory below, O Lord, make the latter sturdy forever and ever and accept our supplications ceaselessly offered to You in it, through the intercessions of the Theotokos.

the life and resurrection of all!

1. While celebrating the divine appearance of the Word in the body,[216] let us, the children of His church, be made resplendent through a [thick] clothing of virtues in a manner worthy of grace, and let us be shown a dwelling worthy of God through the illumination of knowledge, proclaiming praises in the wisdom of faith because

[214] On the influence of Syriac poetry on Byzantine hymnology, see Sebastian Brook, 'Syriac and Greek Hymnography: Problems of Origin', repr. in *Studies in Syriac Christianity: History, Literature and Theology, V* (Hampshire, Brookfield: Ashgate Variorum, 1992), pp. 77-81.
[215] It was performed at the rebuilding of the Holy Sepulchre in 626 and the title of the manuscript reads 'Kontakion on the inauguration of Christ, the Risen God and on the inauguration of any church', see Trypanis, *Fourteen Early Byzantine Cantica*, p. 139, also note 6, p. 140.
[216] The feast of the Nativity/Christmas when the second dedication of the church took place.

the wisdom of the Father built a house[217] of the incarnation for itself and dwelt among us[218] beyond our understanding.

the life and resurrection of all!

2. As the Creator came into his own, being in might, the Lord of all things, we also receive Him as our own because a temple has been dedicated to Him as a dwelling. And seeing that it is not right for the king [God] to enter a mean cave,[219] because of this, let us anticipate the consecration of Wisdom as a palace conspicuously divine for praise and worship of the mystery through which Christ saves the world.

the life and resurrection of all!

3. We really see that the word of divinely inspired Scripture is now being fulfilled; as Solomon of old said 'If God will dwell with men?'[220], not going to doubt, but in amazement when he referred in a riddle to the incarnation of God as a dwelling in a place, and, thus, in spirit he sketched in symbols the things to come. For He [Christ], the living temple from a virgin, put Himself round indivisibly and became God with us.[221]

the life and resurrection of all!

4. Having taken residence in flesh,[222] the Word is content to live in a temple made by hand through the work of the Spirit.[223] His presence is confirmed by mystic rituals as He, who is unlimited and cannot be contained, nor approached by all, shares his life with mortals through grace. The heavenly one is not only under the same roof with those on earth, but also shows them as partakers of the table and He welcomes them to the feast of His flesh,[224] which Christ sets forth for the faithful.

the life and resurrection of all!

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[217] Prov. 9: 1.
[218] John 1:14.
[219] Romanos the Melode, *Nativity Kontakion.*
[220] I Kings 8:27.
[221] Athanasius, *De Incarnatione verbi Dei* 54.3, *PG* 16:1012.
[222] Incarnation.
[223] This somehow contrasts with the theological idea that Christ would be manifest in the flesh and dwell in us and not in a temple according to Ezek 11:19 (also 36:26).
[224] The Eucharist.

5. And let this wonderful church-site, the all-sacred dwelling place of God, be known more than all [others] as its worthiness of God has been pointed out in a conspicuous manner[225]by exceeding all technical knowledge of mankind in buildings. That which is seen and proclaimed as a heaven on earth in shape and in the worship of God, which He [God] chose for himself for a dwelling and you [the emperor] established it in the spirit.

the life and resurrection of all!

6. Yet, the holy church of Christ manifestly surpasses in glory the very firmament[226] above for it does not offer a lamp of light which is perceived distinctively by senses, but it bears the Sun of truth lighting up divinely the innermost sanctuary. With its rays it shines around the word of the [Holy] Spirit in a seemly way day and night, through which God, who said 'Let it be light',[227] illuminates the eyes of the mind.

the life and resurrection of all!

7. The firmament having come into being in the beginning was fixed in the middle of waters as the Holy Scripture teaches[228], and above it moist nature as it is believed to be,[229] and it has got a place among the stars and did not escape the shadows of the clouds. But here are the greater and clearly most amazing things. For by the unchanging good will of God the temple of [Holy] Wisdom has been founded, which truly is Christ [Christ is truly the holy wisdom]. [230]

the life and resurrection of all!

8. A vision of holy waters is mystically seen in it [the church] by spiritual thoughts lifted up. For the spiritual armies are spread around in it everywhere in worshipping form, guarding the mystery of new grace. And the all-hateful clouds of failings do not stand their ground, but are dispersed by the prayers of ardent

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[225] John 2:19-22.
[226] Eusebius of Caesarea, *Ecclesiastical History* X. iv.55.
[227] Gen. 1:3.
[228] Gen. 1:6-8.
[229] Ps. 148:4.
[230] The concept of wisdom as God's attribute is found in the fourth century. Constantine dedicated churches in Constantinople to God's attributes: wisdom, peace and power. Starting with the sixth century, Holy Wisdom is identified with the Logos, Christ, although wisdom continued to be regarded as a divine attribute. See, also, Procopius of Caesarea, *Buildings* I.i.21.

repentance which are offered here with tears because of which Christ purifies everyone.

the life and resurrection of all!

9. We see spiritual stars in this divine firmament of Christ's church fixed in by the gift of the Spirit who established it: ranks of prophets and apostles, and teachers shining brightly with doctrines, neither suffering eclipses, nor fading, nor even setting, but illuminating in the night of life of those wandering in the sea of sin, which Christ takes away through His incarnation.

the life and resurrection of all!

10. The divinely inspired Book tells us that the God-seer Moses of old inaugurated a tabernacle of witness,[231] and he saw mystically the outline of it on the mountain,[232] for he could not be taught the image by ineffable words but he had gained as a helper Bezalel, who inherited wisdom from God,[233] and built that which had been sketched in plan from all kinds of crafts, as God, who had spoken, ordered.

the life and resurrection of all!

11. As if painting a shadow of the future things, he [Bezalel] made an ark gilded all-round of incorruptible wood and put inside it the venerable tablets of the Law, brought the ark that was carried from one place to another, wrapped it in embroidered coloured covers. But what was made manifest in images, which they had had as an inheritance, was not permanent.[234] Whereas the supernatural manifestation of grace is made known to all as being firmly established and was established for eternity by Christ.[235]

the life and resurrection of all!

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[231] The biblical account of the Tabernacle's inauguration is both a presentation of the divine commandments to be followed by Moses in Ex. 40:1-15 and a narrative of the ritual as such in Ex. 40:16-34.
[232] Heb. 8:5.
[233] Ex. 35:30-31, Ex. 36:1.
[234] Heb. 9:23.
[235] Heb. 9:24-26, Eusebius of Caesarea, *Ecclesiastical History* X.iv.55-56.

12. We, possessing the Saviour as lawgiver, have this temple pleasing to God as a most holy Tabernacle and appointing Bezalel as the faithful emperor, having gained assurance of knowledge from God and the wisdom of faith. Whereas the bloodless sacrifice is the all-honoured ark which rottenness [of sin] never holed, which a veil overshadows because it is truly Christ.

the life and resurrection of all!

13. The illustrious Solomon, possessing joy in heart,[236] celebrates in songs the temple in Jerusalem,[237] and as soon as he founded it, exulted and adorned it splendidly. And he assembled the whole people of Israel[238] as spectators of the great deed, and by means of sacrifices and hymns they celebrated its consecration, and the sound of the musical instruments was resounding in the hymns with a harmony of different tones for, in them, God was being praised.[239]

the life and resurrection of all!

14. That temple was talked about as being a place for the name of God[240] invoked by all, and the whole of Israel used to meet hurrying to it, driven by the whip of the Law[241] to bring offerings in it. But they would assuredly praise the superior things that are amongst us. For this magnificent divine work is truly revealed in a form surpassing all things for the senses and intellect, which Christ makes solid.

the life and resurrection of all!

15. This house of God is great and long we will also say in the same tone as the Scripture.[242] For it is not honoured by the gathering of a single nation as of old [Israel], but it is famous and revered to the ends of the inhabited world.[243] And

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[236] Jer. 33:11.
[237] I Kings 8:12-53 for Solomon's prayers.
[238] I Kings 8:2.
[239] This contrasts with Pseudo-Dionysius's presentation of the Eucharistic ritual. See, Pseudo-Dionysius, *The Ecclesiastical Hierarchy* III.3.5, *PG* 3:369-384.
[240] 2 Sam 7:13, I Kings 8: 17.
[241] For the opposition of the Christian obedience from the heart to the Jewish legalism, see Rom. 6: 15,17-18.
[242] Bar. 3:24-25, also, Eusebius of Caesarea, *Ecclesiastical History* X.iv.8.
[243] The first Justinianic church, consecrated in 536, became quite famous. Marcellinus Comes, *Chronicles XV*, (s.a 537.5): Ecclesia maior Constantinopli ab imperatore Iustiniano singulariter in mundo constructa dedicator die VI kalendas Ianuarias.' English trans: 'The great Church in Constantinople, built by the emperor Justinian in a manner unique in this world, was dedicated on 27 December.'

from every nation under the sky they run to it of their own free choice and not as a result of any force, and for that reason even unbelievers confess with boldness that God is its inhabitant.

the life and resurrection of all!

16. The sacrifices are incessantly offered here to God in an odour of a good fragrance in an intellectual way [manner that can only be done by the mind], in spirit and truth and not by savoury smells and flows of blood,[244] tears of prayer with piety and songs of psalms to induce contrition being played by instruments of the spirit, putting to rest the demonic urges arising from passions, instilling moderate pleasure in the salvation that Christ gives to mankind.

the life and resurrection of all!

17. We truly see this wholly revered and wholly blessed house as the eye of the universal Church. Therefore, we shall be filled with all good things, as it is written, singing to God: 'Holy is Thy temple, wonderful in righteousness',[245] being recognised as the imprint of the Liturgy of these above, where there is the cry of exultation and salvation of those celebrating [the consecration of it] in spirit, which God establishes in souls

the life and resurrection of all!

18. You, O Saviour, born of a virgin, protect this house until the end of the world; let your eyes be always turned towards it.[246] Receive favourably the petitions of your servants, grant peace to your people, banish the heresies and shatter the might of foreigners/barbarians, and keep the faithful emperor and priests adorned with all piety, and save our souls since You are God.

the life and resurrection of all!

[244] Ex. 29: 38-40, Ex. 29: 41, Ex. 30: 7-9.
[245] Ps. 64:5.
[246] I Kings 8:29-30.

3. 3 Intertextuality

The inauguration *kontakion* of Hagia Sophia consists of biblical quotations and interpretations of scriptural passages that prepare the ground for envisaging the church as a sacred place functioning at different levels. To understand the biblical interpretations found in the *kontakion,* it is necessary to know more about when it was performed and its place within the ritual of consecration of Hagia Sophia. For this, I look at details regarding the actual ritual.

Not much is known about the ritual itself, apart from brief chronicle entries, nor can it be reconstructed from liturgical texts.[247] Therefore, we can only speculate as to when the inauguration hymn was performed: either during the ritual of consecration after the doors of the church were opened; or, more plausibly, during the first Eucharist celebrated in the newly restored church. However, even if it was sung during the first Eucharistic celebration, it is important to know whether it replaced the sermon or was sung after it. If it was a simple oration, a kind of Christian substitute for the classical panegyric delivered at any inaugural event in Late Antiquity, would it have been performed after the Eucharistic celebration?[248] Did the sermon clarify the rituals of consecration by acknowledging the spiritual nature of the building? Did the oration as an inaugural discourse contain a note of praise for the church building which was, at the same time, an evaluation of what it signified in terms of a sacred space?

While the answers to these questions are admittedly speculative, the matter is still worthy of consideration. From the point of view of the content, both inaugural sermons and orations seem to achieve the same thing. They reveal spiritual meanings pertaining to the function of churches. A comparison of the *kontakion* with the set scriptural readings can help shed light on its aim and give a broader understanding of its symbolism and the way in which it operates. Therefore, this section examines the

[247] The earliest manuscript detailing the dedicatory ritual of a church in the Byzantine Church tradition is the eighth-century *Codex Barberini* (Biblioteca Vaticana, ms. grec. 336). See, Calabuig, 'The Rite of the Dedication', p. 347.

[248] Orations were delivered for every virtually Christian event; see, for instance, orations composed for the reception of relics (Arethas) in Constantinople in the fourth century, Cyril Mango, 'Nine Orations of Arethas from Cod. Marc. Gr. 524', *BZ,* 47 (1954), pp. 6-8.

literary and liturgical web of the *kontakion*, in an effort to see what the author was trying to achieve.

The *kontakion* shows an invocatory emphasis at the beginning and the end of the poem. By placing such an emphasis on prayers, the *kontakion* was in line with the prayerful petitions (ἐκτένειά) expressed in the Liturgy and occasionally in orations, but not so much in homilies. The liturgical setting of the *kontakion* is all the more apparent because of the use of vocative forms in the first and last stanzas 1 and 18. The melodist addressed God as 'O Lord', (σου, κύριε) in the third line and as 'O Saviour' (Σύ, σωτήρ) in the first line of Stanza 18. Stanza 18 is in fact a long prayer, with one request that the church be protected 'until the end of the world' (διαφύλαξον τοῦτου τὸν οἶκον ἕως τῆς συντελείας τοῦ κόσμου).

The *kontakion* seems to convey some of the ideas already sung in the *kontakia* on the occasion of the Nativity, composed by Romanos the Melode. In Stanza 2 of the inauguration hymn, the church building is contrasted with the cave as the earthly place wherein God's revelation and the redemptive work of Christ began. The idea that Christ was born in a cave links to the prelude of the Nativity *kontakion* of Romanos: 'Today the Virgin gives birth.....and the earth offers a cave.....'.[249] Alternatively, Romanos' expression 'no man can approach' is elaborated in the inauguration *kontakion* as 'he who cannot be contained, nor even approached by the whole universe' (Stanza 4). The theological digest of Christ's birth, 'born of a virgin' (Stanza 18) resonates with the beginning of the prelude of the Nativity *kontakion*: 'Today, the Virgin gives birth' as well as with Paul the Silentiary's theological excerpt on Christ's lineage and miraculous birth.[250]

However, as a sung sermon, the *kontakion* ought to make transparent the scriptural readings at the event celebrated. Which texts were read for the ritual of inauguration? Palmer has argued that the inauguration *kontakion* replaced the sermon and, in so doing, contained an exegesis of the scriptural passages. [251] According to him, these were I Kings 8:12-53, recalling the dedication of Solomon's temple, followed by the specific New Testament readings for Christmas, including Hebrews 8:1-7, where

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[249] Romanos the Melode, *Kontakia: On the Life of Christ,* English trans. and introd. by Archimandrite Ephrem Lash (San Francisco: Harper Collins Publishers, 1995), p. 12.
[250] Paul, *Ekphrasis,* 433-437.
[251] Palmer, 'The Inauguration Anthem', p. 139.

Christ and His ministry were contrasted to Moses and the Tabernacle, and finally the main Gospel reading, John 1: 1-3. It should be said that Palmer's reconstruction of the Bible readings is based on the inauguration hymn and does not bear any relation to other possible sources.[252] What is more significant is that Palmer has taken it for granted that the inauguration *kontakion* was a sermon sung after the scriptural readings during the first Liturgy officiated in Hagia Sophia.

While there is no secure sixth-century source that enables us to reconstruct the ritual of consecration with all its scriptural readings, there are other sources which can be corroborated to verify Palmer's hypothesis. For example, in the sixth century, Theodoros Lector, a reader at Hagia Sophia, chronicled that:

> On 24 December the consecration of the Great Church took place for the second time. The all-night vigil of the consecration took place at St. Plato's. St. [Eu]tychios, the patriarch of Constantinople, set out from there with the litany, accompanied by the emperor. Eutychius sat in the golden carriage wearing the apostolic habit and holding the holy Gospel, while everyone sang 'Raise up your gates, your leaders.[253]

The ninth-century anonymous *Diegesis of Hagia Sophia* stated that the celebrations – banquets, offerings and thanksgivings to God – of this church's inauguration lasted until Epiphany.[254] During this period, hymns and homilies were recited for the feast.[255] One possible indication of the temporal performance of the inauguration *kontakion* lies in the already known fact that Christmas Eve in 562 was on a Sunday.[256] This date can be confirmed by the *kontakion,* as the refrain of 'the Life and Resurrection of all' alludes to Sunday, as the day celebrating Christ's resurrection. Furthermore, it is a common feature of the Byzantine liturgical year to see all the biblical events and festal days in relation to each other and to be evaluated from the

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[252] Botte and Brakmann took for granted Palmer's reconstruction, see 'Kirchweihe', p. 1152.

[253] Theodoros Lector, *Ecclesiastical History* 114, 26-31: Τῷ λς ἔτει τῆς αὐτῆς βασιλείας, ἰνδικτιῶνος ια, μηνὶ Δεκεμβρίῳ κδ, ἐγένοντο τὰ β ἐγκαίνια τῆς μεγάλης ἐκκλησίας, καὶ ἐξῆθεν ἡ λιτὴ ἀπὸ πλάττωνος [sic] καθημένου τοῦ ἐν ἁγίοις Τυχίου ἐν τῷ χρυσῷ ὀχήματι, καὶ φοροῦτος τὸ ἀποστολικὸν σχῆμα, καὶ κραροῦντος ἐν ταῖς χερσὶν τὸ ἅγιον Εὐαγγέλιον· καὶ ἐλιτάνευον τὸ, 'ἄρατε πύλας οἱ ἄρχοντες ὑμῶν.; Greek text ed. by John A. Cramer, *Anecdota greacae codd. Manuscripts Bibliotecae Regiae Parisiensis* II (Oxford: Academic Typography, 1839). Also reordered by John Malalas, *The Chronicle* 18.143.

[254] Macrides and Magdalino, 'The Architecture of the Ekphrasis', p. 64.

[255] Macrides and Magdalino indicate as examples the homilies of Proclus and Severius of Gabala, see note 63, p. 64.

[256] *Chronicon Paschale*, *PG 92*, quoted by Macrides and Magdalino, note 68, p. 66.

perspective of all others. Thus, it comes as no surprise to find a reference to Christ's resurrection when celebrating the feast of the Nativity.

Corroborating all other textual evidence, Botte and Brakmann have suggested that the second dedication of Hagia Sophia consisted of a Gospel procession, instead of one with relics at the first dedication. This was followed by rituals of purification with water, the procession of gifts at the beginning of, and during, the recitation of the inauguration *kontakion* and prayers of blessing.[257] Given the lack of secure textual evidence, Botte and Brakmann's conjecture is by far the best. The only thing which can be further investigated is the identity of the scripture readings during the first Liturgy because Botte and Brakmann have never questioned Palmer's reconstruction of these texts.

In order to come closer to identifying these passages, it is necessary to discover what the readings were for Christmas and dedication ceremonies. The tenth-century *Typicon of the Great Church* encapsulated the liturgical rules practiced in Hagia Sophia. It is a good starting point to pinpoint the readings that might have taken place earlier in the sixth century. [258] Thus, for Christmas Eve the readings were: Gen 1:1-13, Num 24: 2, Micah 4: 6-5:3, Is 11: 1-10, Bar 3:36-4: 4, Dan 2:31:45, Is 9:5-6, I7:10-8:10, Ps. 75, 12, Hebrews 1:1-12, Ps. 109:1, Luke 2:1-20, Ps 149:1. However, the *Typicon* stated that the festival of *enkainia* (ἐγκαίνια), that is the festival that celebrated the consecration of Hagia Sophia at a later date, was fixed in the tenth century on 23 December. The readings for this commemoration were: I Kings 8:22-30, Proverbs 3:9-34, Proverbs 9: 1-11, Ps. 92:5, Hebrews 3: 1-4, Ps. 64:2, Matthew 16:13-18., Ps. 148:1. The latter group of readings, more precisely the texts from Hebrews 3: 1-4 and Matthew 16:13-18, were also recorded in the eighth-century *Codex Barberini* as the readings of the Divine Liturgy celebrated for the ritual of consecration.[259] In all the readings relating to the consecration of Hagia Sophia, both in the sixth century and subsequently, the Gospel of John, Chapter 1, which was listed by Palmer, does not appear. Moreover, this text cannot be found in any other source referring to Christmas celebrations or dedications of churches elsewhere in the empire.[260] From this rich mosaic of scripture readings, it is

[257]Botte and Brakmann, 'Kirchweihe', p. 1152.
[258]Juan Mateos, (ed.), *Le Typicon de la Grande Église,* [OCA 165] (Roma: Pont. Institutum Orientalium Studiorum, 1962), pp. 149-151.
[259] Calabuig, 'The Rite of the Dedication', p. 347.
[260] The scriptural readings for the festival of *enkainia* differed considerable from one place to another. For the index of readings for the fourth-century *enkainia* of the church of Anastasis in Jerusalem in Armenian-

difficult to reconstruct the scriptural readings for Hagia Sophia's second inauguration, and even harder to grasp the intention of the melodist. However, I will argue below for the following readings: I Kings 8:22-30, Proverbs 3:9-34, Proverbs 9:1-11, Ps. 92:5, Ps. 148:1, Hebrews 3: 1-4, Ps. 64:2 and Matthew 16:13-18.

While my suggestion is admittedly speculative, all these texts were either included word by word or paraphrased, alluded to and interpreted in a New Testament light by the melodist in the *kontakion*. The phrase 'wisdom has built her house' (Proverbs 9:1) has been interpreted as referring to the incarnation of Christ. The *kontakion* states that 'the wisdom of the Father built a house of the incarnation for itself' (Stanza 1). In this way, Christ becoming flesh is compared to the dwelling of God in the world, yet this is 'beyond our understanding' (Stanza 1). Verse 4 of Psalm 92, 'How great are your works O Lord', seems to be equally sophisticated stated in the first two lines of the prooemium: 'As You have shown the splendour of the firmament above and the beauty of the holy abode of Your glory below'.

I Kings 8:22-30 seems to have been used extensively in the configuration of the meanings and structure of the inauguration *kontakion.* God's presence in the two realms of heaven and earth is used in the first lines of the prooemium in the same way, as it was in the first line of Solomon's prayers of dedication of the Temple in Jerusalem: 'Lord, the God of Israel, there is no God like you in heaven above or on earth below' (I Kings 8:22) reflected in the prooemium (1-2). The theological theme of both the Nativity and the church inauguration (Stanza 3) is introduced through a quotation: 'But will God indeed dwell on the earth?' (I Kings 8:27). Solomon's exclamation that 'the heavens, even the highest heaven, cannot contain you. How much less this house I have built!' is used to explain the incarnation of Christ in an antithetical manner: He, who is unlimited and cannot be contained, nor approached by all, shares his life with mortals through grace (Stanza 4). The invocative inflection of the *kontakion* is indebted to the same Old Testament passage. A few verses of the last Stanza of the *kontakion*: 'Let your eyes be always turned towards it. Receive favourably the petitions of your servants, grant peace to your people' (Stanza 18) seem to have been taken from Solomon's prayer of dedication: 'that your eyes may be open night and day towards this

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Jerusalem and Georgian-Jerusalem lectionaries see, for instance, Michael Fraser, *The Feast of the Encaenia in the Fourth Century and in the Ancient Liturgical Sources of Jerusalem,* PhD Thesis (Durham: University of Durham, 1996), pp. 181-215, [Retrieved August 2011], http://www.encaenia.org/.

house..... that you may heed the prayer that your servant prays toward this place' (I Kings 8:29).

Hebrews 3:1-4 contrasts Christ and His ministry to Moses and his work, stressing the superiority of the new over the old and appears to be the source for the passage, comparing the construction of the Tabernacle by the tribes of Israel to that of Hagia Sophia. Thus, Jesus, in the Bible, is found to be more worthy of praise and honour than Moses: 'just as the builder of a house has more honour than the house itself. For every house is built by someone, but the builder of all things is God'. This sentiment reappears in the inauguration *kontakion*, as follows: 'This house of God is great and long we will also say in the same tone as the Scripture. For it is not honoured by the gathering of a single nation as of old [Israel], but it is famous and revered to the ends of the inhabited world' (Stanza 15).

The Gospel reading from Matthew 16:13-17, in which Jesus is professed as the Messiah, the Son of the living God, by Peter, emerges in the inauguration *kontakion* through reference to Christ at three levels: cosmos, tabernacle and temple. However, the *kontakion* does not mention Peter as the one chosen to be the rock of the Church. In contrast, the anonymous sixth-century writer claimed Christ to be the foundation for both the living and the stone church.

This exploration of biblical intertextuality has revealed the text's saturation with scriptural allusions, quotations and amplifications. However, I would argue that the *kontakion* goes beyond a mere clarification of scriptural readings and thus is more than a versified sermon. It incorporates invocatory prayers and adopts many ideas and areas of theological reasoning specific to the New Testament to reveal the holiness of Hagia Sophia and its role in the general plan of salvation. It is perhaps more appropriate to approach the *kontakion* as a theological discourse on the complex reality of church architecture. The *kontakion* summarised the basic scriptural arguments for churches as sacred spaces for the faithful. Their interpretation from the perspective of the newly built Hagia Sophia prepared the ground for envisaging this church as a sacred space functioning at various levels. What precisely the church building represented, I shall examine in the next section when I will look at the theological attributes of Hagia Sophia.

3.4 Attributes of Hagia Sophia in the Inauguration *Kontakion*

The inauguration ***kontakion*** links Hagia Sophia to various stages of God's intervention into the world and salvation of mankind. However, the melodist did not explicitly connect specific architectural features of the church to biblical events. Apart from minimal remarks on the dome, the light – both natural and artificial – and the representations of prophets, apostles and teachers (Stanza 9), this ***kontakion*** does not provide a comprehensive picture of how architectural features could prefigure or symbolise the mystery of the Incarnation.[261] There is no clear description of the building or identification of architectural forms that could prompt an unmitigated religious experience. Instead, a rich cosmological and theological symbolism prevails throughout the text. Clearly, the intention of the melodist was not to describe architectural features and systematise them in theological symbolic units but rather to illuminate how the church functioned as a whole. The melodist saw the church building's contribution to sixth-century spiritual life in terms of its theological attributes, such as being the dwelling place for God and a place of human-divine encounter.

Two immutable theological attributes of Hagia Sophia, as a holy abode, 'worthy of God' (θεοῦ ἀξία) and as a place for 'proclaiming praises' (αἰνέσεις ἐξαγγέλλοντες), are announced in the opening lines of the ***kontakion***. There is an emphasis on the sacred place of God's glory (ἅγιον σκήνωμα τῆς δόξης σου) right at the very beginning of the hymn (prooemium, 1-3). God revealed Himself in the beauty of the physical church and in the splendour of the heavens. The second attribute is introduced in relation to the first. People, gathered in the dwelling place of God on earth, unceasingly offered prayers to Him. The melodist then stressed that the building was not only a place where the 'heavenly one shares the same roof with those on earth' (οὐ μόνον ὁμόστεγος τοῖς ἐν γῇ ἐστιν οὐράνιος) but also where God Himself welcomed people to 'the feast of His flesh', which is the Eucharist (Stanza 4). This suggests another attribute of the building: a sacrificial altar. Although it has a

[261] In contrast, the sixth-century Syriac inauguration hymn on the church of Hagia Sophia in Edessa linked architectural elements to theological and cosmological ideas: the dome of the church resembles the highest 'heaven', the broad arches portray the four ends of the earth, the courts surrounding the church portray the tribes of Israelites surrounding the Tabernacle, light coming through three windows in the sanctuary announces the mystery of Trinity, the ambo represents the Upper Room at Zion and its eleven columns represent the eleven hidden apostles, the five doors represent the five wise virgins, the nine steps of the sanctuary portray the nine orders of angels.

ritualistic dimension, the church is above all a place of encounter between God and mankind. The fourth attribute of Hagia Sophia comes from its resemblance to a heaven 'both in shape and in worship (οὐρανος τις ἐπίγειος καὶ μορφώματι καὶ λατρείᾳ θεοῦ) (Stanza 5). If the first three attributes point to the utilitarian functioning of the church, the last fulfils a symbolic function. Yet, it links the first attribute to the second one via the third feature, transforming thus the divine abode into a kind of 'heaven on earth'. Each of Hagia Sophia's main attributes is theologically corroborated throughout the entire *kontakion*.

The portable and temporal Tabernacle of the people of Israel from the time of Exodus from Egypt through Canaan was a dwelling place for God, a sacrificial altar and a place of worship.[262] Hagia Sophia functioned in much the same way, yet in a different manner, because it was believed that God had descended to earth, not only in the form of a cloud or a mystic presence, but in the person of Christ: the church was regarded as His permanent home. This aspect is emphasised throughout opening three stanzas of the *kontakion*, although it is boldly stated in Stanza 1: 'The wisdom of the Father built a house for the Incarnation itself and dwelt among us beyond our understanding' (ἡ σοφία γὰρ ἀληθῶς τοῦ πατρὸς ἀνωκοδόμησεν ἑαυτῇ σαρκώσεωσ οἶκον, καὶ ἐσκήνωσεν ἐν ἡμῖν ὑπὲρ νοῦν).

The melodist argued that a fundamental theological belief was that of the real presence of God on earth, as He had chosen to reside among people in the form of Christ: this incarnation in the flesh thus made it possible to build a house here for Him. In it, the faithful could continue to feel God's presence and glory through mystical rites (Stanza 4). The rapprochement between God and mankind reached its highest point in the Eucharist that Christ set forth for the faithful. The other two attributes of Hagia Sophia, as a meeting point between God and His people in prayers and as a place for the re-enactment of the Eucharist, were a direct result of God's dwelling among His people, both in a historic time and in an actual space.

[262] It is well acknowledged that the Tabernacle fulfils several functions in the Old Testament, such as the place of divine revelation, because God promised to speak to Moses in its holy of holiness (Exodus 25:22), as a place for sacrifices (Exodus 29:38-43), 30:7-10) and as the sign of God's presence as a testimony of His covenant of faithfulness, since God promised to dwell with Israel (Exodus 25:8, 29:45-46). See, Craig Koester, *The Dwelling of God: the Tabernacle in the Old Testament, Intertestamental Jewish Literature, and the New Testament* (Washington DC: The Catholic Biblical Association of America, 1989), pp. 6-22.

It was, therefore, logical to think that God's dwelling on earth would be similar to the heavens. The melodist believed that God would choose a cosmos in miniature in which to reside. The design of the building, with its otherworldly interior light, sustained an image of transcendental light throughout the day and night, leading to the knowledge of God (Stanza 6). Gathered in prayers, people partook in this cosmic vision and to them the spiritual thoughts offered up in Hagia Sophia conjured the 'vision of holy waters' before the creation of the material world. Moreover, the rituals carried out in Hagia Sophia were a reflection of the Heavenly Liturgy performed by 'the spiritual armies' (νοεραὶ στρατιαὶ) who watched over 'the mystery of new grace' (τῆς καινῆς χάριτος τὸ μυστήριον): the Eucharist.

There was an interdependence between all of these attributes, be they utilitarian or symbolic. Each attribute contributed to, and was sustained by, or was indirectly alluded to, by the others within a coherent theological reasoning. At its base was the mystery of the Incarnation. Omitting one essential feature entailed a flaw in the role of the church as a space which could assist the encounter between God and His people and could express and support at various levels God's plan for the salvation of His creation.

3.5 The Depth Structure of the *Kontakion* – Shaping Meaning

Having presented Hagia Sophia's general attributes revealed by the ***kontakion***, I now move on to examine the manner in which the argument about the functioning of the church was constructed and how theological and cosmological meanings were attached to the Great Church in the sixth century. The melodist presented the complex theological substratum of the architectural attributes, drawing on the parallels between Old and New Testament events. It seems that the church of Hagia Sophia performed similar functions to sacred spaces in Judaism; however, the raison d'être of Hagia Sophia was the Incarnation of Christ. To articulate this idea, the melodist resorted to typology. The inauguration ***kontakion,*** as I shall show, mediated beliefs and meanings between the Old and the New Testament. The entire sacred architecture of the Old Testament – the Tabernacle and the Temple – as a place of encounter between God and mankind was, in fact, a prefiguration of the mystery of the Incarnation.

God's dwelling amongst mankind in the Tabernacle as well as in the Temple was considered important for Christians too, but the Incarnation of Christ was the landmark designation *par excellence*. The architectural examples of the Old Testament could only hint at what God could accomplish through His own hand in a work equivalent to a new creation: the Incarnation of Christ. The Judaic sacred places were but a sketchy outline of the heavenly dwelling of God. However, in the Old Testament, God interacted with the Jews and assisted the building of such places: 'See that you make everything according to the pattern that was shown you on the mountain' (Hebrews 8:6). No daring undertaking from the tribes of Israel, or Solomon's ambition to confine God to a house made by human hands, could match the miracle of God letting Himself be confined in the human body. It comes as no surprise then that the melodist developed this argument throughout the entire inauguration ***kontakion*** of Hagia Sophia.

Thus, for example, the melodist extensively used imagery of the Tabernacle to lay a theological foundation for Hagia Sophia. In God's plans for the salvation of the world, the spatial organisation of the Tabernacle and its furniture had a symbolic value until the Incarnation of Christ. Many features of the Tabernacle were symbols of Christ, such as the veil (Stanza 12). To understand how this typology worked and how the 'interpretation within interpretation' was used in the ***kontakion***, the melodist drew on the symbolism already revealed in New Testament passages. The Epistle to the Hebrews identified the forecourt of the Tabernacle with the domain of the flesh, and the holy of holiness with the realm of heaven (Hebrews 9:9-10, 9:24). The veil of the Tabernacle separated the two regions. At the time of His death on the cross, Christ left the realm of the flesh and entered the heavenly one. In the church of Hagia Sophia, the veil of the holy of holies was replaced by one made of grace, thus bringing God closer to mankind through Christ.

The inauguration ***kontakion*** placed the Old Testament and the Jewish law in an inferior position to the New Testament and the Christian order: 'We, possessing the Saviour as lawgiver, have this temple pleasing to God as a most holy Tabernacle'(Stanza 12). For the melodist, the full manifestation of divine grace was acknowledged by everyone, and as a result, there was no longer a need for symbols, as Christ had become flesh and dwelt among people. The melodist claimed that Christ had become the principle of the continuity of both the church building and the community of Christians.

The sixth-century anonymous writer also recalled that the Temple of Solomon was commonly perceived as a meeting point between the tribes of Israel and God. It was, however, a meeting place by compulsion, as they were 'driven by the whip of the law' (Stanza 14). The Great Church in Constantinople functioned as a meeting place and *domus dei* too, but it surpassed the Temple: 'for this magnificent divine work was truly revealed in a form surpassing all things for senses and intellect' (ἀνεδείχθη γὰρ ἀληθῶς αἰσθητῶς [ἅμα καὶ νοητῶς] τὸ μεγαλούργημα ὑπεραῖρον τοῦτο τὸ θεῖον ὑπὲρ <ἅ>παντα) (Stanza 14). The reason for this was because 'Christ makes it firm.'

Throughout five stanzas (10-14), typology was employed to accentuate the superiority of Hagia Sophia over any Judaic sacred space. The melodist contrasted the church to the Tabernacle and the Temple using the demonstrative pronoun 'this' (οὗτος) and adverbs of place 'here/on the spot/there' (αὖθι). Hagia Sophia was thus signalled as 'here' (ἐνταῦθα), the place where things are greater and amazing, 'this temple pleasing to God' (οὗτος ναός τὸν θεάροστον) and 'this magnificent divine work' (τὸ μεγαλούργημα τοῦτο τὸ θεῖον). Such spatial characterisations echoed temporal signposts used in the Early Byzantine chants to point out when events of salvation took place, such as: 'Today (σάμερον) the Virgin gives birth to Him who is above all being' (prelude, *On Nativity of Christ*) and they are indications that the hymn was performed in the church.The superiority of Hagia Sophia resulted not only from the fact that Christ resided in it, but also from the congregation gathered in prayer under its dome. The faithful did not belong to a single nation as the tribes of Israel did. For this reason, Hagia Sophia seemed to have been a wonder (Stanza 15). Furthermore, the sacrifices performed in the church were in the mind, in spirit and in truth, as opposed to the animal sacrifices of Judaism. Moreover, the bloodless sacrifice was accompanied by tears of prayers, out of piety (Stanza 16).

The climax of the typology of Old-New Testament was achieved when the church as 'a heaven on earth', chosen for God's habitation among people, was described in religious and cosmological terms (Stanza 6). Firstly, in its glory Hagia Sophia manifestly outshone the cosmos. Light revealed not only the form and space of the building, but also the spiritual character of the church. The melodist claimed that the light which revealed the physical space also revealed the status of the building.

Physical lamps brought light, while the light of the Sun of truth, Christ, shone in the church (Stanza 6). Because of the ingenious system of lights in Hagia Sophia, the edifice was a constant source of divine light 'day and night'. The natural light shone next to the words of the Holy Spirit, thus illuminating the eye of the mind.

The melodist stated that there was an unfathomable bond between the natural light, which potentially carried spiritual light, and the spiritual transformation brought by the Incarnated Christ. To substantiate this idea, he recalled the creation of the firmament in the midst of waters (Stanza 7). The primordial waters gathered by God between earth and the stars in the firmament were a preparatory step in the new creation of Christ becoming flesh. The sixth-century writer daringly claimed that Hagia Sophia surpassed God's creation. This was possible because God had decided to reside in Hagia Sophia in the form of the Eucharist (Stanza 7). The foundation of the new creation, encapsulated now by Hagia Sophia, was Christ: 'For by the unchanging good will of God the temple of Wisdom has been founded, which truly is Christ' (Stanza 7). A mystic vision of the holy waters emerged in the church, because spiritual thoughts were inspired (Stanza 8). Thus, the spiritual armies in worship could be seen guarding the Eucharist, which was 'the mystery of the new grace' (Stanza 8). The creation was restored by Christ and the church building of Hagia Sophia was testament to this restoration. The church building transformed itself into an open heaven. The clouds of human failings were dispersed by fervent repentance and Christ's sacrifice on the cross (Stanza 8). This kept the earthly and the heavenly realms united.

To conclude, I would argue that typology was not only the main way of interpreting biblical events in the *kontakion* but also of thinking about the spiritual importance of Hagia Sophia. The melodist compared Hagia Sophia with the Tabernacle and the Temple, next to God's creation: the cosmos. For him, the Tabernacle and the Temple were considered to be highlights of God's redemptive work and the mystery of the Incarnation and not an end in themselves. The Incarnation of Christ made possible the residence of God in the temple on earth. Moreover, His presence in the Eucharist made the church building greater than the cosmos. By means of typology, the melodist revealed the continuity between Old and New Testament events and contributed to a better understanding of the functioning of Hagia Sophia from a theological point of view.

3.5 Text Pragmatics – Hagia Sophia as 'a Heaven on Earth' (οὐρανός τις ἐπίγειος)

In the previous sections, I looked at the attributes of Hagia Sophia and how the Byzantines thought of their church buildings. In this section, my aim is to come closer to the main intention of the melodist in order to place properly the inauguration *kontakion* amongst the sixth-century textual evidence about Hagia Sophia. How did the inauguration *kontakion* contribute to a better understating of the complex function of a church building? What was its ultimate aim? Of all of the innovative features of the *kontakion*, two are of considerable importance: the invocatory tone of the text and the minimal factual evidence for the architectural design of Hagia Sophia. In the first part, I will focus on the prayer-like features of the *kontakion*, and in the second part, I will discuss how the attributes of the church could relate to each other in order to support the view of Hagia Sophia as 'a heaven on earth' (οὐρανός τις ἐπίγειος).

It was Gassisi who stressed for the first time the prayer-like feature of the *kontakion.*[263] He drew attention to the fact that the *kontakion* had the same content as the prayers recited during the rite of consecration which emerged from later sources. Gassisi paralleled several verses which stressed the common theological substratum for the ritual of dedication and for church buildings, alongside the actual dedicatory prayers.[264] Unfortunately, Gassisi used only a selection of passages from the dedicatory prayer. It is therefore difficult to draw further parallels between the content of the *kontakion* and of the dedication prayers. However, the *kontakion* was close in style to prayers because of its pleas at the beginning and the end.

In the following, I will examine why the *kontakion* makes sense as an elaborate prayer containing biblical references and its place during the first Liturgy celebrated in the newly restored church. In order to explore fully the invocatory dimension of the text, it is helpful to turn briefly to its historical context. Macrides and Magdalino have already pieced together the main events which took place around the dedication of

[263] Gassisi, *Un antichissimo 'Kontakion',* pp. 30-31.

[264] In the Greek dedicatory prayer quoted by Gassisi, God was asked to bestow grace upon the church, and He was approached as the One who gave the Law of Moses and instructed him about the Tabernacle, the One who gave wisdom to Bezalel to construct it, the One who put in Solomon's heart the desire to construct the temple. The prologue of the prayer consisted of the line: 'Make of this place a Tabernacle of your glory, keep it safe until the end of time'; see, Gassisi, *Un antichissimo 'Kontakion',* pp. 30-31.

Hagia Sophia.[265] In 562, Justinian was over 70 years old. The last years of his ruling were marked by both social tensions and natural disasters. His attempts to reconcile religious factions had failed after 20 years of continuous effort. The earthquake in 557 that caused damage to the structure of the Great Church, was recorded as the worst earthquake in history.[266] The subsequent epidemic was regarded as one of the signs of the Second Coming. Both Romanos the Melode and Procopius of Caesarea pointed to an apocalyptic time, and the latter described the demonic appearance of the emperor.[267] Two years before the rededication of the church, other social problems recorded: a rumour in the capital that the emperor had died caused panic and people hurried to buy bread; a fire in the city destroyed many houses and churches; a drought, followed by a lack of south wind, which jeopardised the trade and food supplies of the people of Constantinople, brought more insecurity. A month before the inauguration, a plot against the emperor took place. In contrast to the positive tone of Paul the Silentiary's *ekphrasis,* which mentioned just one of these unfortunate events, the plot against the emperor, the *kontakion* incorporated much-needed prayers for such a turbulent time. It was this feature, which makes sense only in its historical context based on real life, that shifted the emphasis from the sung sermon to a prayer-like theological discourse on church buildings.[268]

Although the melodist seemed to focus on clarifying the issue of how God can dwell in a temple, the way in which he argued makes his readers conclude that he subordinated theological ideas to prayers for the longevity of the church. The collapse of the dome was still vivid in the people's memories. More than ever, they needed the comfort of prayer. To convince the faithful of this fact, the melodist engaged in a very complex way of reasoning, in which scriptural interpretation based on typology was combined with symbolic interpretation of architecture. In Hagia Sophia, 'things are better' than God's creation, and 'manifestly more wonderful' (Stanza 7), since 'this house of God is great and long' (Stanza 15) and here sacrifices were brought 'noetically in spirit and truth' (νοητός ἐν τῷ πνεύματι καὶ ἀληθείᾳ) (Stanza 16). Moreover, the faithful could see in Hagia Sophia 'this wholly revered and wholly blessed house' as

[265]Macrides and Magdalino, 'The Architecture of Ekphrasis', p. 67; see also Mary Whitby, 'The Occasion of Paul the Silentiary's Ekphrasis', pp. 215-228.
[266]Agathias, *Historiae* V.3.1-V.9.9, John Malalas, *Chronographia* 495.9-495.16.
[267]Procopius, *Secret History* 12.18.28, Romanos the Melode, *Kontakion 54*: *On Earthquake and Fires*, esp. stanzas 8-12. An analysis of the *kontakion* was done by J.H Barkhuizen, 'Romanos Melodos: On Earthquakes and Fires', *JÖByz,* 45 (1995), pp. 1–18.
[268] Almost all Romanos the Melode's *kontakia* begin and end with liturgical prayers.

'the eye of the universal Church' (Stanza 17). The church of Hagia Sophia helped people to understand the mystery of Incarnation, guiding them to the divine mystery through Christ, and its dedication was a moment of joy. For this reason, prayers to God to preserve it 'until the end of the world'(ἕως τῆς συντελείας τοῦ κόσμου) seemed to be common-sense.

I now return to my suggestion that the inauguration *kontakion* was not just a sung sermon, which aimed at illuminating the scriptural readings of the first Liturgy celebrated in the rebuilt church. Although there is little evidence for the actual sixth-century dedicatory prayers, it is worth stressing the overlap between the content of the *kontakion*, Solomon's prayer at the dedication of the Temple (I King 23-30) echoed in the *kontakion* and the late Byzantine dedicatory prayers. Thus, the content of the *kontakion* was structured according to the Judaic dedicatory prayers, which place the *kontakion* not in the sphere of biblical exegetics but as being of a liturgical tradition. The only element that does not correspond is the cosmological interpretation of the church, especially of the dome as the firmament.

The consecration of Hagia Sophia, however, also invited the melodist to meditate upon the functions fulfilled by a church building. In contrast to the sixth-century Syriac inauguration hymn, which delved into the symbolical significance of particular architectural features, such as the numbers of columns and windows and decorations, the inauguration *kontakion* elaborated on the theological attributes of Hagia Sophia. The melodist focused on what constituted the mode of being of a church from utilitarian, aesthetical, symbolical and spiritual perspectives. By asserting Christ as the foundation of Hagia Sophia, the melodist pointed out a way to approach the divine mystery, the Trinity in Its Being. This is the Incarnated God, the point where the transcendence of God is fully experienced by mankind and where God imparts something from His very Being. In this way, Hagia Sophia became one of the means of mediating the encounter between God and the faithful.

Macrides and Magdalino considered the inauguration *kontakion* as an *architectural theoria*, that is: 'a remarkably comprehensive statement of the theological significance of the church building'.[269] Yet, the *kontakion* falls short of what McVey has established as the main feature of such a text: that it should envisage architecture as a way of seeing God, of contemplating the divine mystery; there is no gradual movement

[269] Macrides and Magdalino, 'The Architecture of Ekphrasis', pp. 76-77.

from the physical appearance of the church, and consequently of its description, to the spiritual contemplation, as is featured in the sixth-century Syriac *soghita* on the church of Hagia Sophia in Edessa for instance.[270] In contrast, the *kontakion* provides the most comprehensive account of the attributes of church architecture: a *domus dei,* place of worship, a Eucharist altar, and a meeting point: 'heaven on earth.' Moreover, the *kontakion* places great emphasis on the link between the shape and form of spaces to some of the attributes of churches. For instance, a proper divine dwelling, *domus dei,* should formally resemble the firmament, where it was thought that God dwelled. As a meeting point between the heavenly and earthly realms, a church should have also displayed formal and spatial features that reminded the faithful of both heaven and earth. In addition, people gathered together in prayers imitated the prayers of the angels in heaven. From this point of view, the church was 'heaven on earth' because it was in the shape of the firmament, and people worshipped in it, as angels did in heaven.

3.7 Hagia Sophia's 'Archi-Text' for Divine Contemplation (θεωρία)

The remainder of this chapter will attempt to draw a clear conclusion on Hagia Sophia's 'archi-text' for divine contemplation as revealed by the inauguration *kontakion*. One important aspect that needs to be stressed prior to this is the impact of such a text upon the audience, which can be discussed in the context of the ultimate purpose of the sixth-century inauguration hymns. To say that the *kontakion* disclosed the symbolic and theological meanings of the church of Hagia Sophia is rather reductive. Its far-reaching scope and aim need also to be seen in light of the text's reception. Scholars have not sufficiently emphasised the impact of *ekphraseis* of church buildings and inauguration hymns on those hearing and singing them and how the audience would have felt and behaved in church once they had heard such texts. It has been considered that inauguration hymns reduced the experience of churches to 'a set of abstractions'.[271]

[270] McVey, 'The Dome Church as Microcosm', pp. 117-118.
[271] '(the texts) rather than extending experience outward into broader spheres it condenses experience into a set of abstractions. But even in its heyday, this was not a way of perceiving churches that would have seemed obvious to everyone; it was an exegetical exercise for cognoscenti that might, or might not reach a broader audience.' Kieckhefer, *Theology in Stone,* p. 140.

It is worth stressing that the inauguration *kontakion* was sung at an event attended by a mixed audience and its refrain chanted by the entire congregation. More importantly, it would have been subsequently performed at other church dedications. The hymn not only reached as broad an audience as possible but went beyond an exegetical exercise. Rather, as I shall now go on to argue, the church building may well have been perceived and experienced differently once the faithful had received this kind of initiation, with its emphasis on 'viewing' the church in theological terms during church consecration rites. Thus, the inauguration *kontakion*, despite its theologically sophisticated language and biblical cross-referencing, not only conveyed a way of representing Hagia Sophia, but also defined the experience of 'a heaven on earth' when entering a church as normative. In short, the *kontakion* showed and taught the faithful how to make use of the newly consecrated church as a place of encounter with God and what they should experience while inside the Great Church. It purported a religious experience mediated by the architectural configuration of the church.

According to the inauguration *kontakion*, Hagia Sophia's 'archi-text' for contemplation centred on the function of God's dwelling place as mediating an immanent-transcendent presence.[272] Although exposed synthetically, the point that Hagia Sophia was a place where the interplay of divine immanence-transcendence was best represented and experienced was at the core of the *kontakion.* This point received due consideration in the sixth-century Syriac inauguration hymn. The Syriac text stated that although the divine mystery was inaccessible, God had revealed Himself through His creation and Christ. In God's descent to mankind, He came as close as possible to the faithful, by dwelling amongst His people; that is, becoming flesh. The idea underlined by both sixth-century inauguration hymns was that a church was not a simple meeting place but a house of incarnation, a place where the mystery of incarnation could be contemplated and understood every time the Eucharist ritual was celebrated. In this way, the immanent-transcendent mediation through the Incarnation of Christ, as well as the dialogue between the heavenly and earthy realms, began within the very familiar space of mankind, the created world, and, in particular, within churches.

[272] The concept of a church building mediating an immanent-transcendent presence has received full consideration from Turner, *From Temple to Meeting House,* pp. 13-31.

The expression 'heaven on earth' encapsulates the paradox of God's transcendence and immanence, where two aspects placed in different realms meet. The experience of the created world, the Earth, lends itself to the experience of a different otherworldly realm. The Syriac *soghita* makes an important point that church architecture revealed both aspects of transcendence and immanence and the church space was the location of this paradox. Although it is a matter of dispute as to what degree a church can serve as a sign of divine transcendence, the Syriac and Greek inauguration hymns focus on the church building as the site of the paradoxical nature of God's transcendence and immanence.[273]

'Heaven on earth', that is, the Earth containing Heaven, implies that Heaven is open; therefore, the infinite distance between the two realms is temporarily obliterated. It seems strange to compare the experience of the divine mystery with something as pragmatic and material as a building; yet this contrast says more about the fullness of the divine mystery, the transcendence of God, than any other analogy. Polished surfaces, glittering colours and spaces articulated in the interplay of light and shadow point to the outer limits of what mankind can experience in this world and is able to express in words.

In conclusion, I contend that the sixth-century inauguration *kontakion* reflected church architecture as a prefatory means of divine *theoria*, which assisted the three main ways of contemplating God. Consideration of each architectural feature, the dome, the number and symbolism of the windows, doors, vaults and glittering surfaces, as well as the liturgical furniture, could, as an end result, point to God. In this respect, architectural configurations became not only signs consisting of a given symbolic content, but also ways of journeying towards and with God. The symbolic architectural discourse developed throughout the inauguration hymns in the sixth century placed church spaces in a process that had as a terminus point the contemplation of the Unknown in the Being Itself. The purpose of such texts was to disclose the 'archi-text' of a church for the contemplation of God.

[273] Kieckhefer, *Theology in Stone,* p. 102.

CHAPTER FOUR

Experiencing the Architectural Space of Hagia Sophia: a Spatial Analysis

Introduction: Evaluating Hagia Sophia in Spatial Terms

Thus far, I have considered the sixth-century *ekphraseis* of Hagia Sophia as sources for identifying responses to the spatial design of the church. The accounts have suggested the perception of a spatial hierarchy in which the nave was the dominant unit. Described in this way, the architectural configuration of Hagia Sophia seems to resemble a 'double-shell' structure. The phrase 'double shell' is a technical term used by architectural historians to describe a spatial arrangement that features a central space, either a polygon or a circle, surrounded by an enveloping ambulatory which was characteristic of Late Antique martyria, baptisteries and octagonal churches.[274]

In the case of Hagia Sophia, the inner shell acquires a perceptual dominance over the outer. The main central space is developed along the longitudinal axis of the church, which is accessed from the side aisles and the double narthex (Fig. 44). The elongated nave is fully intelligible to the faithful standing in it during rituals. Viewed from the enveloping spaces, its complete geometry is conjectured. The side aisles are spatially subordinate to the nave and create the outer shell. The aisles are directly accessed from the exterior through doors and partly visible when one walks through the main central space. They enrich the spatial experience of the inner shell and provide the additional space that Hagia Sophia as a cathedral requires in order to accommodate a large congregation.[275] However, the main functional role of the outer shell is arguably that of a transitional passage between the nave and the exterior of the building, assuring a smooth route before and after church services and used for rituals only when needed. Exterior staircase towers with ramps, assuring access to the upper galleries, are positioned near the outer shell.

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[274] For more on 'double-shell' structures, see Eugene Kleinbauer, 'The Double-Shell Tetraconch Building at Perge in Pamphylia and the Origin of the Architectural Genus', *DOP,* 41 (1987), pp. 277-293. The only octagonal church known from early descriptions to have been built prior to the sixth century was the Great Church or the Golden Octagon at Antioch; Richard Krautheimer, 'Success and Failure in Late Antique Church Planning', in *Age of Spirituality: Late Antique and Early Christian Art, Third to Seventh Century*, ed. by Kurt Weitzman (New York: Metropolitan Museum of Art, 1979), p. 121.

[275] Krautheimer, 'Success and Failure', p. 133.

The level of subordination between the main spatial unit and its subsidiary spaces can be analysed at different levels, such as appearance, explicitness of boundaries and compositional arrangement.[276] In this chapter, I examine to what extent Procopius' and Paul's descriptions of the church as a double-shell organisation correspond to the spatial experience constrained by the architectural layout of the church. Given that Hagia Sophia is still designated by architectural historians as a domed basilica, this discussion will contribute to a better understating of the Byzantines' experience of the church and how they made sense of its spatial layout.[277] To this end, I will focus on the extent to which the spatial layout of Hagia Sophia induces a well-structured and a gradual, hierarchical spatial experience of its interior.

A domed basilica has a long nave flanked by side aisles, with a vaulting system broken by a dome in front of the apse. The dome rests on arches spanning the nave towards the east and west, while to the north and south they rise above an arcaded colonnade and are filled with architectural panels (tympana). Such an arrangement assumes a balanced spatial dominance created by the similarity of the size, shape and articulation of the spatial units: the nave and the aisles. It falls into the category of a coordinate spatial organisation.[278] However, it must be said that the term 'extended domed basilica' has recently been suggested to describe the longitudinal and centralised features of Hagia Sophia.[279] This complements the term used for the fifth-century 'compact domed basilicas' designed in Cilicia and Isauria, Asia Minor. These edifices introduced for the first time a centralised vertical dimension to a basilica through the placement of a dome in the nave. When applied to Hagia Sophia, the term 'expanded domed basilica' seems to include the buttressing effect of the vaulted aisles and semi-domes on all sides of the core space, next to that of the dome.[280] Despite these useful theoretical clarifications, the experience of the interior space of Hagia Sophia either as a domed basilica or a centrally planned building needs to be more fully assessed.

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[276] For an overview of coordinate and subordinate spatial organisation, see Ralf Weber, *On the Aesthetics of Architecture*, pp. 170-181.

[277] For more on Hagia Sophia as a domed basilica, see Cyril Mango, *Byzantine Architecture,* pp. 107-110. For more on Hagia Sophia as a centralised building, see Krautheimer, *Early Christian and Byzantine Architecture,* pp. 205-235 and William MacDonald, 'Design and Technology in Hagia Sophia', *Perspecta,* 4 (1957), p. 21.

[278] Weber, *On the Aesthetics of Architecture,* p. 171.

[279] Stephen Hill, *The Early Byzantine Churches of Cilicia and Isauria* (Aldershot: Variorum-Ashgate, 1996), p. 50.

[280] For more on Hagia Sophia as an 'extended domed basilica', see also W. Eugene Kleinbauer, *Saint Sophia at Constantinople*, p. 21.

The second aim of my spatial analysis is to explore whether the articulation of space in Hagia Sophia supports spiritual engagement, such as an encounter with God. This investigation is necessary because my analysis of the inauguration *kontakion* has shown that there was a Byzantine understanding of the building as a meeting point between God and the congregation. It is well known that architectural design rests on several compositional principles that not only make buildings intelligible and accessible for immediate utilitarian purposes but also generate and sustain a structured experience that is inimitable and unforgettable. Because the Byzantines laid great emphasis on the centrality and interiority of Hagia Sophia and talked about the church as 'heaven on earth', I will investigate this claim from the perspective of the spatial experience imposed by its architectural layout.

Space syntax theory and Depthmap software provide the required analytical tools with which to investigate how the spatial layout of Hagia Sophia generates its unique architectural experience.[281] At the core of the approach is the fact that architectural space reveals itself in movement, and thus the spatial experience of a building can be quantified by studying its sequential order of viewing spaces. These offer an analytical description of a space that people perceive when they interact with, and move through, a building. As Procopius and, to a lesser extent, Paul described visual sequences in their *ekphraseis* space syntax is therefore the most appropriate means for an investigation of the spatial experience of Hagia Sophia.

4. 1. Hagia Sophia: a Domed Basilica or a Centralised Building?

The reason for designating Hagia Sophia as a domed basilica lies in the arrangement of its basic spatial units along the longitudinal axis of the church, with the aisles on either side of the nave. The atrium, double narthex and the nave are formally aligned. Cyril Mango stressed that such a description reflects to a certain extent the compositional type of a building; however, he provided no further clarification.[282] I would argue that other features are equally important in pinpointing the distinctiveness of a design. To understand how the design of the church relates to

[281] Bill Hiller and Julienne Hanson, *The Social Logic of Space* (Cambridge-Sydney: Cambridge University Press, 1984) and Hiller, *Space is the Machine. A Configurational Theory of Architecture* (Cambridge-Sydney: Cambridge University Press, 1996), also, available online on the space syntax laboratory web page, www.spacesyntax.org, Alasdair Turner, UCL *Depthmap* 10 (London: University College London, 2010).
[282] Mango, *Byzantine Architecture*, p. 107.

clearly defined building types, Hagia Sophia has been frequently compared with the churches of Hagia Eirene and Hagioi Sergios and Bakchos (Fig. 55), which were built in Constantinople during the first half of the sixth century; these are typical examples of a domed basilica and a double-shell structure, respectively.[283]

Two arguments have been employed to describe Hagia Sophia's compositional type as positioned between these two churches. The first considers the layout of Hagioi Sergios and Bakchos as the starting point for Hagia Sophia's design (Figs. 56-58).[284] The church of Hagioi Sergios and Bakchos has a central plan with an octagonal space inscribed in an irregular rectangle and pierced by a projective apse to the east and approached through a narthex from the west. The two-storey colonnade, having alternating straight sides and curved exedras, neatly defines the inner shell, which is currently covered by a 'pumpkin' dome. There is correspondence in the colonnades of the ground floor and gallery, as the pairs of columns above sit directly on the pairs below. The transition from the centralised plan of Hagioi Sergios and Bakchos to the longitudinal space of Hagia Sophia consists in inserting a larger dome into the divided halves of the Hagioi Sergios and Bakchos dome, which have been set aside by taking the transversal axis as the reference point (Fig. 59). This intervention would have conferred a longitudinal processional axis to Hagia Sophia and additional spaces needed for the iterated event of the Eucharist, when the emperor was in attendance.[285] Krautheimer has argued that the radial expansion of an octagonal plan would have been impracticable at the size required for an imperial and patriarchal church.[286]

Mango rejected this hypothesis, arguing that Hagia Eirene is the architectural point of departure for Hagia Sophia's design (Figs. 60-62). Hagia Eirene is a domed basilica with a long nave flanked by two aisles, a projective polygonal apse in the exterior and a double narthex connected to an atrium. The nave is subdivided into two unequal barrel vaults with the dome placed in between. The side aisles are surmounted by vaulted galleries. According to Mango, the innovative nature of the design of Hagia Sophia lies in intercalating curved exedras on both sides of the main square in which the dome of Hagia Eirene is inscribed (Fig. 63). [287]

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[283] Mango, *Byzantine Architecture,* p. 107.
[284] Krautheimer, *Early Christian and Byzantine Architecture,* p. 222.
[285] MacDonald, *Early Christian & Byzantine Architecture,* p. 16; Krautheimer, *Early Christian and Byzantine Architecture*, pp. 224-225, Kleinbauer, *Saint Sophia,* p. 50.
[286] Krautheimer, *Early Christian and Byzantine Architecture*, p. 222.
[287] Mango, *Byzantine Architecture,* p. 107.

Either of these interpretations is valid in their own right, depending on how one chooses to look at the general layout of these churches. If the analysis starts with the core space or the spatial nucleus developed along a vertical axis, it seems clear that the starting point for Hagia Sophia's design is that of Hagioi Sergios and Bakchos. If the examination starts with the shape of the central space, flanked by the side aisles, and its underlying horizontal axis, the source appears to be the design of Hagia Eirene. These arguments are specifically constructed from the analysis of these buildings ground plans. They do not take into account the visitors' experience of the interior space of the building. Perception of architectural space is not confined to a straightforward translation of the geometrical properties of shapes.[288] I would argue that perceptual criteria are also important in establishing a building type, as they complement the geometrical attributes of spaces. Because the relationship between the spatial core of an edifice and its subsidiary units is important, it is beneficial to focus on this aspect.

Generally, in the basilica churches, the longitudinal axial focus is visually reinforced at different levels.[289] Firstly, the nave, clearly defined along a primary horizontal axis, is heightened by the lighting system of the clerestory. Secondly, the files of columns flanking the nave give a strong directional pull towards the east. Thirdly, the axial focus remains constant when one progresses along the path through the nave towards the eastern apse. The timber roof, when hidden by a flat ceiling, underlines the perspectival axis, whereas the rhythmic arcades running alongside the nave mark out the self-evident spaces of the aisles. Fourthly, the aisles echo the design of the nave and thus repeat the experience of a longitudinal space on a smaller scale. At every level, the nave and the aisles parallel the same spatial dominance.

In contrast, the double-shell design replaces the clearly stated horizontal driving point with vertical lines of force. The spatial attribute of the aisles is to envelope and frame the core of the building, thus giving a pronounced vertical direction to the entire configuration. Moreover, the polygonal and circular shapes of

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[288] For 'perceptual' versus 'geometrical' space, see Weber, *On the Aesthetics of Architecture,* pp. 132-136.

[289] Hans Buchwald, 'First Byzantine Architectural Style: Evolution or Revolution?' *JÖByz,* 32 (1982), pp. 33-45, reprint in *Form, Style and Meaning in Byzantine Church Architecture* (Aldershot: Ashgate Variorum, 1999); MacDonald, *Early Christian & Byzantine Architecture,* pp. 14-15. There is a slight difference between the basilicas built in the western and eastern parts of the Roman Empire in Late Antiquity. The basilicas were chiefly lit by clerestory windows in the former, whereas additional lighting in the aisles was provided in the eastern parts of the Empire. The abundance of stone in the East encouraged the development of stone and brick barrel vaults, whereas in the West timber trusses were largely used to cover the naves.

the inner shell heighten a spatial centre situated on the vertical axis. To say that aisles or galleries 'envelop' the nave enforces the fact that it is the dominant spatial unit while the aisles provide the additional space required for various utilitarian functions, such as transition or extra space. The term may also indicate that central interior space possesses a strong formal autonomy related to its intelligibility when the observer stands in it. Although the spatial nucleus can become less intelligible when the observer views it from the enveloping areas, it retains a perceptual dominance. I would argue that the extent of visual and spatial intelligibility from all possible locations and a pronounced vertical direction seem to provide a better criterion to distinguish a centrally planned building from a basilica-like configuration.

The churches of San Lorenzo in Milan, San Vitale in Ravenna and Hagioi Sergios and Bakchos in Constantinople are strongly marked double-shell configurations. Multiple ancillary spaces inserted in either round or polygonal plans create a strong sense of spatial hierarchy. The spatial dominance of the main unit over the ancillary spaces is achieved though the addition of small appendices, such as niches or alcoves, as is the case with San Vitale and Hagioi Sergios and Bakchos. Despite the addition of units, the core space retains its spatial dominance. It can be inferred that such an arrangement enforces a visual and spatial centre that leads to an unequalled impression of the grand weightlessness of the interior. At the same time, it increases the overall sense of the experienced concavity of the inner shell. The vertical focus results not only from the spatial properties of the polygonal or circular forms of the inner shell but from the existence of one major spatial unit, especially when the outer spaces are symmetrically arranged in relation to the main centre. Furthermore, the enveloping spaces stress the boundaries of the core unit; thus they become dominant as they contain visual centres, which are projections of the spatial centres of the outer spaces. In this way, the vertical focal point is enforced at different levels and from all corners.

Two other churches, one belonging to a fifth-century architectural complex at Dağ Pazarı in Cilicia (Fig. 64) and the other the sixth-century church at Qasr ibn Wardan in Syria (Fig. 65), offer a similar spatial experience, despite having a rectangular layout specific to a 'compact domed basilica'.[290] Both have a clearly defined

[290] For more on Qasr ibn Wardan, see Krautheimer, *Early Christian and Byzantine Architecture,* pp. 247-249. To generate my own drawings I have used John Warren's layouts without modifying the upper part of the church, in which the dome is represented as resting on a cylindrical drum. The extant masonry fragments seem to suggest that there was no drum in between the dome and main piers or walls, but all

spatial nucleus covered by a dome that is inscribed in a larger rectangular unit that defines the outer limits of the churches. At Dağ Pazarı, the nucleus is a square with stepping piers at all four corners. The dome rests on arches in all four directions. A pair of columns divides the nave from the side aisles and the narthex towards the north, west and south. The sense of centrality is achieved by subdividing the larger unit in a major space and subsequently surrounding it with a secondary spatial unit. At Qasr ibn Wardan, the nucleus is rectangular, defined by two piers towards the east and a U-shaped masonry structure towards the west. The dome is raised on a drum that rests on barrel vaults towards the east and west and on arches and tympana on the northern and southern sides.

Although a central square bay covered by a dome normally reverses the strong horizontal pull of the longitudinal space of a basilica, the particular location of the dome in the vaulting of the nave is vital in creating a complete vertical focus. At Dağ Pazarı and Qasr ibn Wardan, the domes are placed in the centre of the nave, which coincides with the centre of the rectangular outer enclosures (Figs. 66-67). Stacked or superimposed physical centres contribute to the creation of a spatial centre, which induces a strong sense of concavity and centrality. This is more apparent when one compares the position of the dome in the vaulting of Hag. Eirene with that of Hagia Sophia. In Hag. Eirene, the dome is placed in the second bay of the vault towards the east end. The interior achieves a tremendous vertical uplift, yet this is averted to a certain extent by the horizontal driving point of the nave (Fig. 68). Instead, in Hagia Sophia, because the dome is positioned exactly in the middle of the distance between the main doors and the eastern apse, there is a strong vertical axis in the inner shell. This is achieved in spite of the elongated shape of the nave (Fig. 69).

4.2. Hagia Sophia: Spatial Configuration in Light of Rituals

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the present drawings of the church represent a drum; John Warren, *Greek Mathematics and the Architects to Justinian* (London: Coach Publishing, 1976), p. 9. For details of the church at Dag Pasari, see Hill, *Early Byzantine Churches*, pp. 149-162, esp. 155-160, Hansgerd Hellenkemper, 'Early Churches in Southern Asia Minor', *Churches Built in Ancient Times: Recent Studies in Early Christian Archaeology*, ed. by Kenneth Painter (London: Society of Antiquaries of London and Accordia Research Centre, 1994), pp. 213-238, and Antonio Iacobini, 'Un modello architettonico bizantino tra centro e periferia: la chiesa cupolata ad ambulacro', *Rend. Pont. Acc. Rom. Arch,* 76 (2003/2004), pp. 135-174. I have used Iacobini's plates to generate my own drawings.

Another aspect which needs to be considered in the discussion of the spatial perception of the church is when the perceptual dominance of one spatial unit was revealed during the rituals; how a basilical or a double-shell organisation would have interacted with the progression and development of the Byzantine Liturgy and how people might have experienced the Liturgy in Hagia Sophia. These aspects are important because they help to understand both how the church functioned spatially in the sixth century and the impression that the Byzantines had of the building. Krautheimer addressed the intelligibility and visibility of spaces from the nave and the aisles, respectively, in his discussion of Hagia Sophia's building type.[291] According to him, the nave of Hagia Sophia was mainly used for the processions of the clergy, while the laity, including the emperor when he attended the Liturgy, stood in the aisles. In this way, it seems that the Byzantines experienced the rituals from spaces with no direct visual relation to the sanctuary. Furthermore, only part of the dome could be visualised from there. Accordingly, the faithful followed the Liturgy with only a fragmentary visual access to it, while the chants, scriptural readings, sermons and prayers would have been heard through peripheral reverberations.[292]

Even if one accepts this interpretation as accounting for the theatrical appearance of the Byzantine Liturgy – the nave as a stage and the side aisles as spectators' areas – the interaction between the spectators, the performers and the liturgical event would have been poorly served in terms of visibility and acoustics. However, the main objection to this view is that Krautheimer has completely ignored the participatory, dynamic character of the Byzantine Liturgy, which was one of the particular features of the time. Moreover, Mathews' research on the relationship between the liturgical planning of churches and their architecture in Constantinople has shown that the nave was used by the laity.[293]

The most recent research on the evolution of the Liturgy of St. John Chrysostom in Hagia Sophia has been carried out by Robert Taft, who reinforces one of Mathews' points about the position of the laity in the church.[294] Corroborating a variety of sources, but focusing mostly on sixth-century texts, both scholars have argued that the nave was freely used by the laity. This does not exclude the fact that the aisles and the galleries were also used by women, men and catechumens. Both

[291] Krautheimer, *Early Christian and Byzantine Architecture,* p. 225.
[292] Krautheimer, 'Success and Failure', p. 134.
[293] Mathews, *The Early Churches of Constantinople,* pp. 117-135.
[294] Taft, *The Great Entrance,* pp. 178-213.

Procopius of Caesarea and Paul the Silentiary mentioned that the outer shell was used by women, so some people would have experienced the Liturgy in a minimal manner and not participated effectively in it. Yet certain stages of the Liturgy required that the laity move towards the sanctuary, for instance, when taking Communion.

Paul the Silentiary pointed out that the nave was the main area of interaction between the clergy and the laity; in particular, the sanctuary chancel, ambo and solea.[295] The only place restricted to the laity was the sanctuary.[296] The congregation could access the nave through the doors of the double narthex, having thus a gradual perception of the basilical space when they approached the church. However, during the key moments of the Liturgy, such as the scriptural readings, sermons and sanctification of the gifts for Eucharist and Communion, they would spend the entire time moving about the nave. Thus, they had the possibility to experience the rituals from the domed space.

It is equally important to consider the extent to which an axial longitudinal configuration conformed to the processional character of the Liturgy in the sixth century. Krautheimer argued that an octagonal plan did not reflect the imperial processions of the time. The Byzantine Liturgy had an urban character and involved processions throughout the city in the sixth century. Both of Hagia Sophia's inauguration ceremonies (537 and 562) entailed processions from nearby churches of Anastasia and St. Platon and the solemn 'opening of the gates' of the Great Church.[297] However, this does not mean that the terminal point for the procession, the church itself, could not have a different spatial configuration.[298]

As a final point, I would argue that, from a liturgical point of view, the nave would have been extensively used during the Liturgy. It is therefore important to see how it was experienced. My investigation of the experience of the nave is developed

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[295] Paul, *Ekphrasis* 372-375.

[296] Canons XIX and XLIV of the Council of Laodicea (368), stipulated that only the clergy could enter the sanctuary and forbade women from entering it. Both Procopius and Paul repeated that the sanctuary was an exclusive space for the sacred ministries. The Council in Trullo (692) reinforced the canon (XLIV), allowing only the emperor in when he made his offering to the church. See, Henry Percival (ed.), *The Seven Ecumenical Councils of the Undivided Church. Their Canons and Dogmatic Decrees*, Together *with the Cannons of All the Local Synods which have Received Ecumenical Acceptance* (Edinburgh: T&T Clark, 1900), pp. 291,330, and 756.

[297] For details of the first inauguration ceremony, see Theophanes, *Chronographia* [AM6030, AD 537/8]: 'They set out from St Anastasia, with Menas the patriarch sitting in the imperial carriage, and the emperor joining in the procession with people'.

[298] For a description of the urban, processional character of the Liturgy in Late Antiquity, see John F. Baldovin, *The Urban Character of Christian Worship: the Origins, Development and Meaning of Stational Liturgy,* [OCA 228] (Rome: Pontifical Oriental Institute, 1987).

along two points. In the first part, I will describe the configuration of Hagia Sophia in terms of spatial integration by means of space syntax research tools. In the second part, I will examine how light contributed to the perception of the spatial configuration of Hagia Sophia in two spatial units.

4.3 Spatial Analysis of the Church of Hagia Sophia

4.3.1 Space Syntax Theory – Overview

Space syntax is a practical and theoretical research programme for studying the spatial characteristics of buildings and cities from analytical and qualitative to descriptive standpoints.[299] It has been developed at University College London (Bartlett School of Architecture and Planning) under the direction of Bill Hillier. The driving force for this project has been the need to understand how people orientate and distribute themselves within buildings and how they use complex, configured spaces.

The theory rests on two philosophical premises. The first is that space is not just a setting for human activity but an essential aspect of human experience. The way people experience space in buildings or cities can be quantified in terms of a series of differently shaped visual fields, often referred to as isovists or viewsheds. An isovist is the area of space directly visible from a location within a given environment.[300] Michael Benedikt has introduced this analytical approach to architectural spaces by using visual polygons, which link a vantage point with the edges of visible surfaces in order to describe the spatial properties of an area.[301] It describes the experience of space in terms of a fragmentary visualisation of spatial layouts. However, scholars have become aware that space is perceived as a whole and not as comprised of visual fields unrelated in space. Spatial experience is therefore not the sum of visual polygons originating from specific local points with a local reference. To remedy this deficiency, researchers have considered an analysis of the inter-visibility of multiple isovists

[299] Sonit Bafna, 'Space Syntax: A Brief Introduction to Its Logic and Analytical Techniques', *EAB,* 35 (2007), pp. 17-29.
[300] Michael L Benedikt, 'To Take hold of Space: Isovists and Isovist Fields', *Environ Plann, B* 6 (1979), pp. 47-65.
[301] Ibid., p. 48.

originating from all possible locations within an area or layout that is not constrained by the local reference of the isovist.[302]

This leads to the second fundamental premise of space syntax; this is the idea that the way space works for people does not depend on the formal or shape properties of an individual area, but rather on the relations between spaces that have different shapes and thus spatial properties. A spatial layout should be analysed for its capacity to affect people's movements, to offer logical sequences and choices for movement in a clear and effortless way. Taking into consideration the choices given by openings and enclosures in the specific locations of buildings, it is possible to map the extent to which spaces are visible from many viewpoints, as well as the distance between areas and how easily accessible they are from every point of the layout. Based on this, buildings can be described as 'integrated' or 'segregated' configurations. A high level of spatial integration is established when there is a high number of relations between each space and it requires few steps to reach other spaces. In contrast, visually 'segregated' spaces exist when there is a low number of ways to pass through them in order to reach remote areas of the layout and a longer route to get to all spaces.

Space syntax analysis has two main benefits. On the one hand, it enables a description of spatial configurations and their typologies in terms of spatial integration, which can be further illustrated as connectivity, accessibility and visibility of spaces.[303] On the other, it links the spatial ordering to a hierarchy of relations between people. Because layouts tend to be used according to 'natural patterns', the way people move inside buildings reflects the social logic embedded in the spatial layouts.[304] In consequence space syntax has proved to be a useful research programme for buildings, regardless of their utilitarian functions, and ultimately for cities.[305]

4.3.2 Spatial Integration, Connectivity and Visibility in Hagia Sophia

My spatial analysis of Hagia Sophia is based on Mainstone's plan of the ground level, which he has reconstructed taking into consideration sixth-century textual

[302] Alasdair Turner, Maria Doxa, David O'Sullivan and Alan Penn, 'From Isovists to Visibility Graphs: A Methodology for the Analysis of Architectural Space', *Environ Plann B,* 28 (2001), pp. 103-121, esp. p. 104.
[303] Bafna, 'Space Syntax: a Brief Introduction', pp. 18-19.
[304] Bill Hiller, *Space is the Machine* (Cambridge-Sydney: Cambridge University Press, 1996), pp. 149-181.
[305] It has also been applied to church architecture, see David Chatford Clark, 'Viewing the Liturgy: A Space Syntax Study of Changing Visibility and Accessibility in the Development of the Byzantine Church in Jordan', *World Archaeology,* 39 (2007), pp. 84-104.

evidence, in particular Paul the Silentiary's *Ekphrasis.*[306] I transferred Mainstone's plan into vector drawings made of points, lines, curves and polygons, using AutoCAD. I prepared four layouts of Hagia Sophia. I created the first by eliminating the adjacent buildings of the baptistery, skeuophylakion and the horologion and developed it further with three variants of church layouts: one that contained the atrium, the double narthex and the nave with its side aisles; the other two were based on Procopius and Paul's descriptions. The base plans were then imported into UCL Depthmap 10 to generate an axial map though all of the open spaces and an axial analysis performed. For the isovist and visibility graph analysis, I used a layout that contained all adjacent buildings as configured by Mainstone.

Axiality is generally considered to be a universal ordering principle, but in space syntax it is regarded as the capacity to structure people's perception of an architectural space.[307] The study of axiality in Hagia Sophia by means of an all-line axial map and isovists is helpful, because it shows how a double-shell configuration performs and allows movement within it and how different parts of the building are perceived from specific locations (Fig. 70). While an all-line map shows the level of spatial integration of the entire configuration, the visual graph analysis spotlights layouts from specific locations. An all-line map contains all possible lines, such as the longest or the shortest required when passing through an entire spatial configuration. It reflects the way in which people visually experience interior space by means of lines-of-sight from all possible locations of the layout. Therefore, the analysis based on an all-line map takes into consideration all possible spatial connections. On the other hand, isovists describe the spatial experience of a building as a series of visual fields physically demarcated by wall surfaces, rather than in terms of abstractedly constructed spatial relations. As Procopius' account was based on visual sequences of the spatial layout, the isovists come as close as possible to the views a visitor can encounter in Hagia Sophia. An isovist analysis also enables one to examine the visibility of surfaces in spatial configurations, which is important when attempting to describe a building type and envisaging how people might have experienced the Liturgy in Hagia Sophia. The graphs generated by the UCL Depthmap 10 software quantify the level of visual and spatial integration from the highest to the lowest and

[306] Mainstone, *Hagia Sophia*, plate A2, p. 271.
[307] For the axial map, see Alasdair Turner, Alan Penn and Bill Hillier, 'An Algorithmic Definition of the Axial Map', *Environ Plann B,* 32(2005), pp. 425-444.

indicate the potential for movement using a colour code: from red (highest) to indigo through orange, yellow, green and blue (lowest).[308]

4.3.2.1 All-line Axial Mapping

Figure 70 summarises all axes of sight and movement as paths that cross the inner and outer shells of Hagia Sophia in one direction, and which correspond to our understanding of its architectural space in case of three configurations: the complete layout, Procopius' and Paul's double shells. The graph captures the extent to which the nave, side aisles and the narthex are visible and accessible and, as a result, likely to be used on a regular basis. The analysis run for each of the all-line map explicates that there are a minimum of four choices to make when passing through spaces and a maximum of 7,401 choices, with an average of 2,366 lines, for the entire configuration. For Procopius' and Paul's double shells, the number of connectivity attributes is a minimum of 7/7 lines and a maximum of 3,022/3,344 with an average number of connective lines of 1,513/1,584. The level of connectivity does not differ significantly in Procopius' and Paul's double-shell configurations. However, when the visitor experiences Hagia Sophia with its additional spaces, the level of visual connectivity differs considerably from the experience of only the interior space. Figure 71 charts the level of integration of all three plans. The analysis shows that the most integrated spaces of Hagia Sophia are the nave and the area around the royal doors. The highest level of integration of the entire configuration is the area of the royal doors, where all lines converge: 25.3303 in total. In contrast, in Procopius' and Paul's double shells, the most integrated area is the nave. Its core of visual integration is the space beneath the dome, with 21.5371/20.1919 converging lines.

The all-line axial analysis is taken one step further by reducing it to the fewest-line map in Depthmap (Fig. 72). At this level, the software calculates how far each part of the building is from all other parts: how many steps it takes to get from one corner to another, from one line to all other lines. If the number of steps is low (2) then the element is integrated, showing high levels of movement, while a high number (34) indicates that the area is segregated and accessible only through complex routes; consequently, it shows that that space is poorly used. Integrated areas attract

[308] For colours, see fig. 70.

movement while segregated ones restrict it. Figure 19 shows the fewest-line map for Procopius' and Paul's double-shell structures and the movement required to reach from one spatial unit to the other.

All of the graphs show that the nave Hagia Sophia displays high levels of connectivity, integration, accessibility and visibility (Fig. 73). The sanctuary area, including the bema and the ambo, were placed in highly integrated spaces, close to the most spatially integrated area of the church. This type of organisation provides a space that orientates. In the past, it would have received the congregation and directed them towards the altar. The long axial lines cross the nave and link the altar to the double narthex by facilitating large-scale movement. The side aisles on the ground level are slightly segregated but they are positioned along the longest axial line, which is well integrated, thus reducing spatial segregation. The main piers prevent some lines from reaching the extremities of the edifice and obstruct the visibility of the altar from specific locations in the side aisles.

The spatial analysis highlights the area beneath the dome as an extremely well-integrated space. According to the research on the social implication of integrated spaces, the nave seems to be the ideal space for social interaction.[309] I will take this statement one step further: this area also has a transcendental value, as it supports interplay with the transcendent. The huge dome covering the core of the nave forces visitors to move their heads in order to look at the summit of the church. By simply prompting a physical movement of the head, a vertical point of visual attraction is introduced in a configuration that resembles a basilica at eye-level. In so doing, it takes the beholder from the realm of social interaction facilitated by the horizontal pull of the layout and invites an engagement with 'the above'. Accordingly, this upright input marks this area as an ideal meeting point between two realms: the earth and the heavens. It can be concluded that the spatial centre of the church and the multi-dimensional spatiality of the interior are responsible for the sense of interiority rendered by Procopius and Paul in their *ekphraseis* and the meeting point inferred by the inauguration *kontakion.*

[309] Hiller, *The Social Logic of Space,* p. 230.

4.3.2.2 Isovist and Visibility Graph Analysis

Isovist and visibility graph analysis enables one to quantify the perception of space and, more importantly, to explore the potential of perception when spaces are used. The analysis considers the perception of spaces at eye-level. Benedikt advocated the idea that the way in which space is experienced, and thus used, is directly linked to the interplay of isovists.[310] He argued that it is enough to observe how the outline of an isovist, its shape and size, change in order to understand how spatial properties vary across a spatial layout. Hence, sets of isovists and isovist fields become alternative ways of describing a space. The 'isovist polyhedron' or 'piece of space' with its geometrical properties, such as the area and perimeter, is used to index local properties of space. Visibility graph analysis via Depthmap has improved spatial analysis by relating a vantage point of view to the edges of visible surfaces, and thus it is possible to describe a spatial organisation with reference to accessibility and visibility. Moreover, the analysis has enabled researchers to compare layouts with different shapes.[311] In view of that, the visual graph analysis shows how different parts of the building are perceived from different locations within it and the way in which surfaces become visible from specific points or along ritual routes. This comprehensive analysis greatly contributes to our understanding of the basic spatial attributes of architectural space.

The layout of Hagia Sophia is shaped by the intersection of two major axes. The longitudinal one corresponds to the axis of the main entrance and runs through the length of the church. The main transversal axis extends across the width of the church and stretches between the doors of the side aisles. Figure 74 shows the space of the nave experienced as a series of visual fields as the beholder moves towards the sanctuary. The overlaid isovists show that the nave is fully visible and intelligible along the longitudinal axis. The same is true when the church is crossed along its width (Fig. 75).

In both graphs, the isovists represent everything that can be seen by the beholder as they gradually move along the major axes (Fig. 76). Figure 76 shows the level of compactness of the overlaid generated along the main axes. The isovists cover

[310] Benedikt, 'To Take Hold of Space', p. 50
[311] Turner *et al*., 'From Isovists to Visibility Graphs', p. 103.

the entire layout as shown in Figures 77 and 78 which summarise all surfaces seen along the longitudinal and transversal axes. The axis of the main entrance, which crosses the short transversal axes perpendicularly, gives guidance on the overall structure of the layout. Along the major perspectival axis, visual access to the length of the church is gained. Thus, the spaces perceived in this way provide vital information for understanding the church's shape and geometry. In contrast, the visibility of the spaces from the exterior towards the interior, the inner narthex, is restricted (Figs. 79-80). As beholders approach the interior space along the two types of axes, they gain information about the entire configuration (Fig. 81).

However, it is very unlikely that the faithful, in the past, would have experienced the space along both axes in this abstract way; only one of the axes was extensively exploited during the Liturgy. The longitudinal axis was used in imperial processions and whenever the congregation accessed the shrine through the main (royal) doors. The isovists drawn along it give us an idea of how the nave was spatially perceived in these imperial processions (Fig. 74). The total length of the transversal axis was unlikely to have been used during the Byzantine Liturgy, although Taft has argued that it was used for the procession of gifts from the skeuophylakion to the altar.[312] The isovists drawn along this route indicated by Taft are represented in Figure 82. The visibility graph shows that the nave of Hagia Sophia is well integrated. Both axes, even followed to a halfway point during specific moments of the Liturgy in the processions, were sufficient for the understanding of the church layout as formed of two basic units: the inner and outer shells.

4.4 Spatial Properties of the Layout of Hagia Sophia Based on the Isovist Properties

The perception of a building's spatial attributes is often a response to the combined effects of the geometric properties of an enclosed space.[313] What results is a

[312] For the relation between the skeuophylakion and processions at Hagia Sophia, see Taft, 'Quaestiones disputatae: The Skeuophylakion of Hagia Sophia and the Entrances of the Liturgy Revisited', part I, *OC,* 81 (1997), pp. 1-35 and part II, *OC,* 82 (1998), pp. 53-87; also, Taft, 'The Skeuophylakion and Processions at Hagia Sophia', in *The History of the Liturgy of St. John Chrysostom,* vol. VI: *The Communion, Thanksgiving and Concluding Rites* [OCA 281] (Rome: Pont. Institutum Orientalium Studiorum, 2008), pp. 494-564.

[313] Gerald Franz and Jan M. Wiener, 'Exploring Isovist-Based Correlates of Spatial Behavior and Experience', in *Proceedings of the 5th International Space Syntax Symposium,* vol. 2, ed. by Akkelies Van Nes (Delft: Technical University, 2005), pp. 503-517.

complex experience of the layout that can be discussed in terms of spaciousness, openness, complexity, predictability and order.[314] The spatial attributes of buildings are intuitively perceived by people and may be to a certain extent responsible for the ways in which churches are described. They can be analysed by means of various isovist properties such as area, perimeter, vertices, compactness and occlusivity.[315] Gerald Franz and Jan Wiener have suggested mathematical formulae which link the spatial qualities to the measurable isovists.[316]

In the following part, I will focus on three spatial attributes of Hagia Sophia, which may have played an important role in envisaging the church as 'heaven on earth'. These are spaciousness, openness and complexity. To properly evaluate the spatial properties of the layout of the Great Church, I ran a comparative analysis with the spatial attributes of the main churches mentioned so far in my discussion: the churches at Dağ Pazarı and Qasr ibn Wardan, and Hagia Eirene and Hagioi Sergios and Bakchos in Constantinople. For this, I drew isovists from the main doors, the centre of the nave and what was presumably the space in front of the altar (Figs. 83-87). Then, I extracted the numerical values of the isovists and computed them according to Franz and Wiener's formulae for each spatial attribute, ranking them from the highest, 1, to the lowest, 5 (Tables 2-4).

According to Franz and Wiener, spaciousness, or the expansiveness of a space, is an essential part of spatial experience. It provides an idea of how large or small an enclosure appears to an observer. It is one of the main factors that plays a role in the observer's decision to choose a place to sit in a church and is responsible for the emotional reactions of the observer to the dimensions of an enclosure. It can easily be approximated by basic measurements such as the isovist area. Spaciousness is a constant attribute of space, regardless of the human or monumental scale of the building or interior spaces. However, isovist measures cannot shed light on the relationship between the enclosure's dimensions and other intrinsic qualities of space related to it, such as proportion and scale.

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[314] For an overview of the qualities of architectural space, see Francis D.K. Ching, *Architecture: Form, Space and Order,* 2nd ed., (New York-Toronto: John Wiley & Sons, Inc, 1996), pp. 166-176.

[315] Michael Benedikt and Clarke A. Burnham, 'Perceiving Architectural Space: From Optic Arrays to Isovists', in *Persistence and Change. Proceedings of the First International Conference on Event Perception,* ed. by William Harren and Robert Shaw (Hillsdale-London: Lawrence Erlbaum Associates Publishers, 1985), pp. 103-114.

[316] Franz and Wiener, 'Exploring Isovists', pp. 505-507, esp. Fig. 206, p. 507, which summaries the formulae.

In Hagia Sophia, the isovist generated from the area beneath the dome is greater than that in front of the ambo, which in turn is greater than that in front of the royal doors. Therefore, a strong sense of spaciousness is experienced in the centre of the nave of Hagia Sophia and in front of the ambo. These areas accommodated a large amount of movement and were extensively used during the Byzantine Liturgy. This reinforces the fact that the spatial centre of the church is located in the area beneath the dome. When compared with other churches, Hagia Sophia appears to be very spacious from all locations: the royal doors, the centre of the nave and in front of the ambo. This is as expected, because the church of Hagia Sophia is the largest of all of the churches discussed here, while the church at Qasr ibn Wardan appears as the least spacious because it is the smallest (see Table 2). It is noteworthy that the isovists drawn for church at Qasr ibn Wardan present close numerical values in all three locations, which imply that spaciousness was experienced in the same way regardless of specific locations. The fact that the metric area of the visual field remains constant within the perimeter of the spatial nucleus of this building explains this distinctiveness.

Table 2 Isovists ranked for spaciousness (metric area)

Church	Dağ Pazarı	Hag. Sergios and Bakchos	Hagia Sophia	Hag. Eirene	Qasr ibn Wardan
Main doors	4	3	1	2	5
Centre nave	4	3	1	2	5
Altar	4	3	1	2	5

The quality of openness gives a degree of enclosure. The response to openness is captured in people's way of describing it as offering 'shelter' or 'prospect'. The degree of physical enclosure of a space, intimately determined by the arrangement of its defining elements, such as walls, screens and the patterns of its openings, has an influence on the perception of the architectural form. Navigating spaces depends on the patterns of openings and the number of vistas offered. The configuration of the enclosing elements can be quantified by isovist measurements describing the convexity of isovists and the number of vistas or views by the openness ratio.[317] It can be also approximated as the rapport between the square isovist perimeter and the area, and I used this relation to calculate the degree of openness of all of the churches.

[317] Franz and Wiener, 'Exploring Isovist-Based Correlates of Spatial Behavior and Experience', p. 506.

In Hagia Sophia, the highest level of openness is experienced in front of the ambo, whereas from the royal door decreases to a third of the level of openness experienced in the centre of the nave. The overall openness experienced in Hagia Sophia from all three locations stands in a complex relation to the other churches (see Table 3). Thus, the door isovists of Hagia Sophia and of the church at Dağ Pazarı have the same numerical value, meaning that from the main doors visitors experience the same quality of openness in both buildings. A very similar spatial experience is offered in the churches of Hag. Eirene and Hagioi Sergios and Bakchos, as the numerical values are very close. This means that a high degree of openness is experienced from this location in all four churches. It is the church at Qasr ibn Wardan that is dissimilar, as here there is a low level of openness from all locations.

Table 3Isovists ranked for openness (isovist perimeter²/area)

Church	Dağ Pazarı	Hag. Sergios and Bakchos	Hagia Sophia	Hag. Eirene	Qasr ibn Wardan
Main doors	1	3	1	2	4
Centre nave	4	2	1	3	5
Altar	4	2	1	3	5

The degree of complexity establishes a layout's level of intelligibility, its diversity and richness in terms of visual perception allowing for unexpected patterns of visual perception. While the central space of a double-shell structure, for instance, provides a complete and coherent visual field, this is obstructed by the disposition of screens, columns and piers. Franz and Wiener have suggested that this spatial attribute can be measured by means of the number of vertices or segments making up an isovist, or vertex density, or approximated as roundness by calculating the rapport between the area and the square isovist perimeter.[318]

Hagia Sophia offers a high visual complexity for an observant both in the centre of the nave and in front of the ambo. Complexity is low from the royal doors, which means that this location offers a coherent, uninterrupted vista. When compared to the other churches, Hagia Sophia's pattern of complexity is shared by all churches: it increases from the main entry towards the centre of the nave and the altar. In fact, all inner-door isovists offer an unobstructed vista (see table 4).

[318] Franz and Wiener, 'Exploring Isovist-Based Correlates of Spatial Behavior and Experience', p. 506.

Table 4 Isovists ranked for complexity (area/ isovist perimeter²)

Church	Dağ Pazarı	Hag. Sergios and Bakchos	Hagia Sophia	Hag. Eirene	Qasr ibn Wardan
Main doors	3	2	3	4	1
Centre nave	3	5	1	4	2
Altar	3	5	1	4	2

The analysis of the spatial attributes of the layout of Hagia Sophia has shown that the area beneath the dome is the main spatial protagonist of the church in terms of its spaciousness, openness and complexity. The numerical data and graphic illustrations confirm that this area holds a privileged position within the layout in terms of spatial integration. What Procopius and Paul the Silentiary identified as the centre of the church is in fact the area where there are high levels of spaciousness, openness and visual complexity. It is worth remembering that it was the space from where the Gospel was read out and the faithful moved about a great deal during the Liturgy, as Mathews and Taft have argued.

4.5 Light in Hagia Sophia

In this second part of my spatial analysis, I will examine whether the lighting system of Hagia Sophia influences the perception of the interior space in two spatial units and whether the nave benefits from the best illumination. It must be said that this discussion is not about the assessment of the level of luminance in Hagia Sophia in the sixth century. Given the fact the original window material has not been preserved and many windows have been walled off or their profiles altered, I will pursue a few points which can be archeologically substantiated, such as the geographical position of Hagia Sophia, its particular orientation, which influence directional lighting and, thus, perception of the interior space. Directional lighting is given by a light source with parallel light rays which do not diminish with the distance and it is usually associated with natural light. In contrast, the positional lighting weakens in intensity as the light rays do not run parallel from the light source and it is useful when discussing the artificial light.

The geographical position of the church (41°0'31"N, 28°58'48"E), its particular orientation with respect to the sun's path (an azimuth of 123.5° which gives an orientation of 33.5° south of east), and the position of windows all influence how light

is distributed and orientated towards specific locations in the church. The orientation of the sixth-century Hagia Sophia was determined both by the long practised tradition of the east-west direction of temples and churches and by urban constraints relating to the foundation of Constantinople in the fourth century.[319] However, recent research has shown that the reason beyond Hagia Sophia's specific orientation was an overall morning illumination throughout the year.[320]

This has impact on how directional light heightens the perception of surfaces and their textures, enables the appreciation of spatial attributes and reveals the spatial articulations of a building.[321] In Hagia Sophia, the directional lighting, influenced from the specific orientation of the church, establishes a spatial hierarchy that is subjectively negotiated by beholders at various levels within the building. Initially, this hierarchy is achieved by creating focal points, which either enhances an existing spatial order, one space prevailing over the rest, or play a role in attributing meanings to different parts of the building, such as the eastern end of the nave. As the sun stands in the elongation of the longitudinal axis between 7.45 am (the winter solstice) and 10.30 am (the summer solstice) on each day of the year, the nave benefits from the best possible illumination throughout the day and year, respectively.[322] Figure 88 shows how the inner shell is constantly illuminated throughout the year. In the morning, sunlight streams across the east end of the nave, while in the afternoon, the nave is luminous with reflected light bouncing off the floor (Fig. 89). The display of light in the mornings justifies Procopius' personification of the sanctuary as the 'face' of the church.

Although recent light measurements on a horizontal plan have shown that the aisles are at least as bright as the nave, the fact that the latter is spatially integrated means that a subjective appreciation of the overall layout can be structured into two

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[319] For details of the orientation of churches in sources prior to the sixth century, see *Constitutiones Apostolorum* and *Testamentum Domini*, English trans. by Mango in *Art of the Byzantine Empire,* pp. 24-25; also, Vitruvius*, On Architecture,* IV.v.1. For Hagia Sophia's orientation, Schneider has argued that the church was aligned with the Hippodrome, the imperial palace and the Augusteion; Alfons M Schneider, 'Die vorjustinianische Sophienkiche' *BZ*, 36 (1936), pp. 77-85, esp. p. 78. Based on the archeological evidence, the sixth-century Hagia Sophia deviated from the inclination of the previous church built by Theodosius by about 2.5°south east, which is still the current direction of Hagia Eirene, but looks much more in line with the direction of the Hippodrome.

[320] Nadine Schibille, 'The Use of Light in the Church of Hagia Sophia in Constantinople: The Church Reconsidered', in *Current Work in Architectural History: Papers read at the Annual Symposium of the Society of Architectural Historians of Great Britain 2004*, ed. by Peter Draper (London: Society of Architectural Historians of Great Britain, 2005), pp. 43-48, esp. p. 46.

[321] A useful study of light and architectural space is by Marietta Millet, *Light Revealing Architecture* (New York-Toronto: Van Nostrand Reinhold, 1994).

[322] Schibille, 'The Use of Light in the Church of Hagia Sophia in Constantinople', p. 46.

distinct sequences.[323] This spatial structuring is reinforced by the existence of two focal points in the nave created by lighting fixtures. The nave is topped by the dome, which has a ring of windows at its base. Their number and profiles seem to be the original ones. It can be safely argued that the dome is directly and constantly illuminated throughout the day and the year regardless of the sun's position on the orbit. Moreover, the shape of the dome tends to gather light through successive reflective processes. The visual impact of this configuration is overwhelming: the space below the nave looks flooded with light. In addition, the east and west ends of the nave are partly glazed bay windows. In the eastern part of the church, the light sources are concealed in its lower part, apart from the eastern apse that is equally illuminated in its height by two rows of windows and the light ring at the base of its conch. The west end of the church is illuminated from above. Consequently, the area below the dome and the eastern apse become quasi-focal points emphasising one dominant spatial unit.

The disposition of sources of light in Hagia Sophia encourages movement towards both ends of the church, as people tend to gravitate towards the brightest areas of a building. The eastern part of the church contains windows which beckon people towards both in the nave and the side aisles (Fig. 90). However, the quantity of the light entering the nave from above emphasises the prevailing axiality of the church's design, in which movement is constantly incited in the nave. For this reason, the inner shell is strongly highlighted while the side aisles subordinated to it in terms of lighting.

Colour, materiality and texture can change the qualities of directional lighting. The nave of Hagia Sophia has retained its original marble revetments to a large extent, although the galleries have lost most of their marble plaques. Some vaults have kept their mosaics. Most of the series of marble slabs came from the same block and were cut in such a way as to preserve the natural veining and arranged symmetrically along a vertical axis. There are 12 types of marble in Hagia Sophia, covering a large spectrum of colours from white and porphyry to red and green. Even though it is difficult to discern the reason behind their arrangement, recent research has indicated that the slabs were coordinated in accordance with their value and reflective properties.[324] Thus, the inner

[323] For the light measurements see, Schibille, 'Light in Early Byzantium: the Case of the Church of Hagia Sophia' (unpublished doctoral thesis, University of Sussex, 2004), p. 99. It has been however proven that conventional measurements of illumination rarely correlate with one's subjective assessment of the adequacy of illumination of an interior; for this, see, Ralph G. Hopkinson and John D. Ray, *The Lighting of Buildings* (London: Faber and Faber, 1972), p. 29.
[324] Schibille, 'Light in Early Byzantium,' p. 151.

shell, including the inner narthex, was embellished with the most precious marbles and stones. Moreover, their polychromatic and reflective surfaces brightened the nave, heightening the importance of the inner shell.

In conclusion, the deconstruction of the interior space of Hagia Sophia into two basic spatial units was grounded in the spatial properties of the layout, decorations and light. My spatial analysis has stressed that the inner shell is the main spatial unit, while the area below the dome acts as the spatial centre that can also be a place of encounter between mankind and God. The visual analysis based on isovits has indicated that the entire architectural configuration of Hagia Sophia fosters the participation of the faithful in the activity that it allows. For the modern visitor, it helps to envisage what it meant to enter Hagia Sophia in the sixth century. Approaching the building, the faithful were caught in the effects of the longitudinal space. It was a space that encouraged movement, suggesting a sense of temporal passage from this world to the next. It suited the Byzantine processions of entering the church. During this procession, the clergy, the emperor and congregation became one body as they walked through the doors of Hagia Sophia. The longitudinal axis also gave a clear sense of direction, towards the 'face' of the church where the Eucharistic ritual took place.

In the nave, the faithful were irresistibly drawn to the dome by the bright light coming through the windows at its base and by the upward movement of the semi-domes, arches and pendentives. The horizontal direction sustained by the basilical axiality suddenly became a vertical one. Although the light coming from the windows of the apse reinforced the horizontal axis, the dome had a tremendous visual impact, annulling the horizontal direction of marching. The vertical axis introduced a spiritual dimension to the spatial dynamics of the church as the mind could be raised up towards God.[325] The clearly defined polarities, such as sacred and profane, heaven and earth, invisible and visible, ceased to separate and defragment the space beneath the dome. It can be suggested that the ascendant movement of the semi-domes and pendentives towards the highest peak of the church, localised in its centre, mirrored one's spiritual journey towards God. God's presence required a detachment from the

[325] Paul Hesse, 'La dynamique axiologique d'une église espace vivant de cosmogonie sacrale: La formulation spatial du sacre,' in *L'espace liturgique: ses élémnets constitutifs et leur sens. Conférences Saint-Serge LII Semaine d'Études Liturgique,* ed. by Constantin Braga (Roma: Centro Liturgico Vincenziano, 2006), pp. 235-262.

worldly realm, which makes sense as the horizontal axis was no longer sensed in the centre of the nave.

The experienced induced by the architectural configuration of Hagia Sophia supported a religious journey of the believer which culminates in the encounter with God. Through the longitudinal space, the Byzantine worshippers participated in the processional movement as members of the body of Christ engaging itself on the way to the Second Coming, and through the central space they entered into a dialogue with God. The longitudinal space gave a believer the opportunity to profess his faith as the living stone of the Church. In contrast, the central space facilitated a human-divine encounter. The linear progression of time, the epitome of the divine economy of salvation was complemented by the spatial axis, 'heaven-earth', which facilitated the encounter with the divine.

CHAPTER FIVE

Hagia Sophia's 'Archi-text' for Contemplation in the Sixth Century

Introduction: How can experience be deemed religious?

In the first two chapters of this thesis, I examined Procopius' and Paul's descriptions of Hagia Sophia with the aim of considering how these texts inform us about the sixth-century experience of the architectural space of the church. In the third chapter, I turned my attention to the inauguration *kontakion* as the evidence revealing Hagia Sophia's 'archi-text' for the contemplation of God. In the fourth chapter, I looked at the design principles and spatial properties that make the church space function as a meeting place, a point emphasised by the inauguration hymn. The main function of this chapter is to expound Hagia Sophia's 'archi-text' for the contemplation of God by showing how the church functioned as a catalyst of religious experience. My discussion of Hagia Sophia's 'archi-text' is centred on the following question: to what extent could the experienced architectural space of Hagia Sophia augment the experience of the divine during the Eucharistic ritual and thus influence the way in which the Byzantines talked about their religious experiences and envisaged churches as 'heaven on earth? Because I use the concept of a religious experience in the sense of becoming aware of God's presence, the main question of this chapter can be rephrased as: to what extent can 'becoming aware of God' arise from the way a church space is used and experienced?

In order to understand how an architectural experience could possibly lead to other types of non-spatial experience, I will explore how the Byzantines defined and explained the overall effect of encountering and perceiving Hagia Sophia and then related this to the experience of the divine. My analysis is twofold, prompted by two pointers that surfaced from my examination of the textual evidence. The first comes from Procopius' claim that the heavenly splendour reflected in the magnificence of the church raised the mind to God. While encapsulating the 'archi-text' of Hagia Sophia for the contemplation of God, this statement points to the aesthetic experience as

mediating the process of becoming aware of God's presence.[326] Because of this claim, my examination begins with an evaluation of the aesthetic qualities of Hagia Sophia's design that will enable me to establish the extent to which aesthetic experience was deemed religious by the Byzantines. The second point of my analysis focuses on the conceptual metaphor of 'heaven on earth'. The inauguration *kontakion* expounded the biblical and dogmatical arguments for the church building as 'a heaven on earth in shape and in worship of God' (οὐρανος τις ἐπίγειος καὶ μορφώματι καὶ λατρείᾳ θεοῦ). However, its anonymous writer did not illustrate how individual architectural elements or Hagia Sophia as a whole contributed to the experience of a heavenly realm in the church. My analysis will therefore be centred on the individual elements and the spatial configuration of Hagia Sophia which could have led to the perception of the church as a built cosmos and 'heaven on earth'. In this way, I will discern how the Byzantines ascribed spiritual meanings to architectural elements based on the spatial experience of the building.

5.1 The Aesthetic Qualities of Hagia Sophia's Design

In this section, I deal with the expressive qualities of the design of Hagia Sophia according to Procopius' and Paul's writings. Initially, I discuss how the Byzantines defined and assessed beauty (κάλλος): was it apprehended by the senses (αἰσθάνομαι), or merely by the intellect (λογοθεώρητος)? Having established this, I then explore where the aesthetic potential resided in Hagia Sophia. For this, I draw on the inauguration *kontakion* to investigate how beauty contextualised in theological terms was prompted by the utilitarian function of the church as a place of worship and a sacrificial altar. The entire discussion will help to determine the critical apparatus with which the Byzantines approached architectural experience as a source of aesthetic and, ultimately, religious experience.

[326]For an overview of the elements shared between aesthetic and religious experiences, see James Alfred Martin Jr., 'Aesthetics: Philosophical Aesthetics', in *Encyclopaedia of Religion,* ed. by Lindsay Jones (Detroit-London: Macmillan, 2005), pp. 44-53, and Jacques Maquet, *Aesthetic Experience: An Anthropologist Looks at the Visual Arts* (New Haven-London: Yale University Press, 1986), esp. chapter 5: 'Aesthetic Vision as Contemplative', pp. 51-58; Rudolf Arnheim, 'Aesthetics: Visual Aesthetics', in *Encyclopaedia of Religion*, pp. 53 -56.

5.1.1 How was beauty defined?

In his *ekphrasis*, Procopius focused on both the expressive and constructive qualities of the design of Hagia Sophia. The first lines of his technical description stated that the beholders gazed at the 'fairest prize of beauty' (καλλίστευμα), which was 'overwhelming' (ὑπερφυής) to those who saw it. For those who had not had yet the chance to visit, the sight was 'altogether incredible' (παντελής ἄπιστος).[327] In the next lines, 28-29, Procopius substantiated his claims in an attempt to explain why the design prompted such a visual spectacle. Hagia Sophia's indescribable beauty lay in its play of masses or forms (ὄγκος), harmony of proportions (ἁρμονία τοῦ μέτρου), moderation [no excess] (οὔτε ὑπεράγαν) and adequacy [no deficiency] (οὔτε ἐνδεινῶς) and chorography (χορός).[328] It displayed more splendour (κομπωδεστέρα) than any ordinary building and was more decorous (κοσμιωτέρα) than others which did not display proportion (ἄμετρος), with its illumination [abundance of natural light], interplay of sunbeams and reflected rays and interiority/spatiality (χῶρος) revealed by an abundance (περιουσία) of radiance (αἴγλη).[329]

The spatial arrangement of architectural elements produced 'a single and most extraordinary harmony in the work' (μίαν μὲν ἁρμονίαν ἐκπρεπεστάτην τοῦ ἔργον ποιοῦνται) (47). The gold revetment of the vaulted and domed ceiling added flamboyance (κόμπος) to the beauty of the church, as the light reflected from the mosaics outstripped the shining properties and values of the gold itself (54). The aisles

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[327]Procopius, *Buildings* I.i.27: Φέαμα τοίνυν ἡ ἐκκλησία κεκαλλιστεμένον γεγένηται τοῖς μὲν ὁρῶσιν ὑπερφυές τοῖς δὲ ἀκούοθσι παντελῶς ἄπιστον.

[328] On chorography as a propriety of the sacred space in Byzantium based on the sixth-century textual evidence, especially Procopius' and Paul's *ekphraseis*, see Nicoletta Isar, 'Chorography (chora, choros) – a Performative Paradigm of Creation of Sacred Space in Byzantium', in *Hierotopy: The Creation of Sacred Places in Byzantium And Medieval Russia*, ed. by Alexei Lidov, (Moscow: Indrik, 2006), pp. 57-82; Isar, 'Choros: Dancing into the Sacred Space of Chora', *Byzantion*, 75 (2005), pp. 199-224; Isar, 'Choros of Light: Vision of the Sacred in Paul the Silentiary's Poem Description S. Sophia', *ByzF*, 28 (2004), pp. 215-242. For the acoustic quality of space based again on choros, see Pentcheva, 'Icons of Sound: Hagia Sophia and the Byzantine Choros', in *The Sensual Icon,* pp. 45-56.

[329]Procopius, *Buildings* I.i.28-29: κάλλει δέ ἀμυφήτῳ ἀποσεμνύνεται. τῷ τε γὰρ ὄγκῳ κεκόμψευται καὶ τῇ ἁρμονίᾳ τοῦ μέτρον.

and galleries, although not as grand as the nave, received the same treatment. Because of their correspondence (ἴσον) and similarity (ἐμφερές), they helped to 'beautify and adorn' the church.[330]

From these sparse comments, it is apparent that Procopius conceptualised beauty in terms of proportion and harmony. Harmony is determined by various operations performed on relevant units or modules and implies a concord of contrasted elements, whereas proportion refers to a proper relation between various parts, such as of one part to another or to the whole.[331] This idea that beauty could be attained by designing compositions, in which harmony of proportion (ἁρμονία τοῦ μέτρου) would be accomplished, was reiterated throughout *Buildings.* Procopius often emphasised the aesthetic quality of a building as equivalent to its beauty. For instance, the church of the Mother of God at Blachernae, despite having huge dimensions was remarkable because the breadth of the church was proportionate to its length.[332] When the size of a building was a noteworthy feature, Procopius always placed it in relation to beauty, as was the case with his description of newly restored hospice of Samson. After Justinian's intervention, the building became a noble (ἀξἴωτέον) construction and much larger with the addition of many new rooms.[333] For the church of the Virgin at Pege, Procopius considered that it was sufficient to mention the beauty (κάλλος) and magnitude (μέγεθος) of the shrine, as it surpassed others.[334] A marvellous, beautiful effect (κάλλος θαυμάσἴον) was achieved when a church was of good size (εὐμεγέθης) but fitted and framed together (τεκταίνομαι) as was the case with the newly restored church of the Archangel Michael restored by Justinian.[335] Another feature worth stressing was, according to Procopius, the interplay of mass and void, as displayed in the church of the Mother of God at Blachernae: the excessive bulk (ὑπέρογκος), likely to crumble, was balanced in space in an orderly manner. As a

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[330]Procopius, *Buildings* I.i.57: ἀλλὰ καὶ τὸ ἴσον αὐταῖν τῷ ἱερῷ ἐς κάλλος διήκει καὶ ὡραΐζει τὸ ἐμφερές.

[331]Francis D.K. Ching, *Architecture: Form, Space and Order*, p. 278.

[332]Procopius, *Buildings* I.iii.3: ἐπιμήκης μέν, κατὰ λόγον δὲ περιβεβλημένος τῷ μήκει τὸ εὖρος.

[333]Procopius, *Buildings* I.ii.16: κάλλει μὲν κατασκευῆς ἀξιώτερον.

[334]Procopius, *Buildings* I.iii.7: τοσοῦτον δὲ μόνον εἰπεῖν ἀποχρῆσει, ὡς τῶν ἱερῶν κάλλει τε καὶ μεγέθει ὑπεραίρει τὰ πλεῖστα.

[335] Procopius, *Buildings* I.iii.16: εὐμέγεθες δὲ τεκτηνάμενος κατὰ τὸν νῦν φαινόμενον τρόπον, ἐς κάλλος μεταβιβάζει θαυμάσιον οἷον.

result, the magnificence (μεγαλοπρεπής) of the church was free from bad taste (ἀπειρόκαλος).[336]

These examples stress Procopius' concern with beauty as being dependent on the harmony of proportions. The sixth-century interpretation and appreciation of church spaces called for an ability to discern and take pleasure in geometry. This echoes the discussion of buildings in terms of due measure or proportion (μέτρον) and agreement of the parts (ἁρμονία) in Classical Antiquity. However, a Late Antique theory of proportion is difficult to reconstruct, as there is no extant Greek treatise on architecture. In the absence of such texts, Marcus Vitruvius Pollio's *De archiectura* (first century) is the only source, albeit a second-hand one, for getting a broad picture of the Greek technical vocabulary. It has been argued that Vitruvius, in the section that lays the theoretical groundwork for architectural design (the second chapter of the first book), retained much of the Greek knowledge and understanding of proportion.[337] Vitruvius identified six fundamental principles of architecture and provided for some of them the Greek correspondent: ordonnance or order (*ordination*/τάξις), eurhythmy or proportion (*eurythemia*), symmetry (*symetria*), correspondence (*commensus*), distribution or economy, planning (*distributio*/οἰκονομία), decor (*decorum*) and disposition or arrangement (dispositio/διάθεσις).[338] The problem with Vitruvius' technical terms is that, when carefully analysed, they seem to be interlinked, one depending on the other.[339] As a result, Vitruvius' work is of little help in understanding more about the Byzantine concern with beauty in the context of qualities such as magnitude (μέγεθος), excessive bulk (ὑπεράγαν), deficiency (ἐνδεινῶς) or radiance (αἴγλη). Additionally, a theory of proportion may imply philosophical principles or world-views pertaining to the order and complexity of the universe, and neither Procopius' text, nor Paul the Silentiary's *Ekphrasis of Hagia Sophia* allow for this aspect. Paul did not use the word κάλλος for beauty in his poem;

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[336] Procopius, *Buildings* I.iii.5: μάλιστα δὲ ἄν τις ἀγασθείη τοῦ ἱεροῦ τοῦδε εἴζω γενόμενος τὸ μὲν ὑπέρογκον τοῦ σφαλεροῦ χωρὶς τεταγμένος ὁρῶν, τὸ δέ μεγαλοπρεπὲς τοῦ ἀπειροκάλου ἐλεύθερον.

[337] Richard Padovan, *Proportion: Science, Philosophy, Architecture* (London-New York: Spon Press, 1999), p. 156.

[338] Vitruvius, *On Architecture* I. II, 1, Latin text and Greek trans. by Frank Granger, [Loeb ed.] (Cambridge Mass: Harvard University Press, 1962), p. 25.

[339] For an overview of Vitruvius' principals, see Hans van der Laan, *Architectonic Space* (Leiden: E.J. Brill, 1983), p. 67; also, Padovan, *Proportion,* pp. 159-175.

instead, he preferred 'magnificence' (ἀγλαΐα), which can sometimes have the meaning of beauty or adornment, depending on the context.

The stupendous dome resting on soaring vaults was appraised by Procopius and Paul both as a 'wonder' (θάμβος) and a 'spectacle' (θέᾱμα). By covering the vast extent of the nave, the dome gave the impression that it rested on air like the canopy of heaven. In Procopius' case, such structural audacities compelled a reflection on the essence of beauty. For him, the alluring force of beauty was magnified by technological innovation. Although the dome was thoroughly examined in order to be described, its source of artistry and allurement could not be grasped. Procopius postulated that even an inquisitive mind could not comprehend the beauty and artistry of Hagia Sophia, as observers 'are still unable to understand the skilful' (οὐχ οἷοί τέ εἰσι ξυνεῖναι τῆς τέχνης), and people always departed subdued by the incomprehensible sight (48-49). The dome's visual impact transcended both human intellectual and expressive capacities. Similarly, when he described the church of the Virgin at Pege, Procopius claimed that a mental representation of the object could not be easily done, nor its beauty properly described in words.[340] It can be inferred that the essence of Hagia Sophia's architectural design was unfathomable to the Byzantine mind, while the beauty of the church was proclaimed in terms of its visual impact upon the beholder.

Paul the Silentiary developed the idea that beauty first addressed the eyes and not the mind when he concluded that the church was 'clothed in beauty' and every detail 'filled the eye with wonder'.[341] Although it was to be expected that the technological astonishment would ultimately be processed by the mind, Paul claimed that it was still the eyes, as the first sensory organ to deal with visual stimuli, which controlled the impression formed. Similarly, when Paul described the ciborium in the sanctuary, he noted that the vases placed in between the silver columns, with figures like candles, were bearers of ornaments (κοσμαῖα), flashing a silver ray and not the light of fire.[342] It seems that what was commonly expected of candles, their function to bring light, was here arrested by the force of the beauty of the ornaments. In this case, Paul assumed that people were fully aware of the function of objects, and at the same

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[340] Procopius, *Buildings* I.iii.7: αὐτὸν δὲ τὸν νεὼν οὐδὲ ὀνόμασιν ἐπαξίοις συλλαβεῖν, ῥᾴδιον, οὐδὲ διανοίᾳ σκιαγραφῆσαι, οὐδὲ διαψιθυρίσαι τῷ λόγῳ.

[341] Paul, *Ekphrasis* 806-807: Πάντα μὲν ἀγλαΐῃι καταειμένα, πάντα νοήσεις ὄμμασι θάμβος ἄγοντα.

[342] Paul, *Ekphrasis* 747-478: λιπαυγέα δείκελα κηροῦ, κόσμον ἀπαγγέλλοντα καὶ οὐ φάος.

time, that they would acknowledge the visual impact of decorations which added a new quality to the common candlelight.

According to Paul, beauty could be evaluated in the context of the actual contemplation of the form of the decorative objects which embellished Hagia Sophia. This idea introduces an element of subjectivity but relates directly to objective qualities being contemplated. Moreover, beauty emerged as an account of the necessary conditions under which the meeting of an object and a subject gave rise to an aesthetic experience. The object contemplated needed to possess the elements appropriate to something that had a relevant form or fulfilled a function.

In contrast to Procopius' and Paul's *ekphraseis*, the inauguration *kontakion* introduced another dimension to the discussion of beauty. Hagia Sophia's beauty derived also from its suitability for its ultimate purpose. The aesthetic pleasure sensed in Hagia Sophia by Paul was associated by the writer of the inauguration hymn with the function of the building and related to concepts such as appropriateness for an end, which was the celebration of the Eucharist and the worship of God (Stanzas 4 and 13). This idea places great emphasis on the utilitarian function of the church, and, in doing so, it claims that an aesthetic judgment is made once the church is evaluated for adeptness to its utilitarian purpose.

The inauguration *kontakion* also claimed that Hagia Sophia was revealed 'for the senses and intellect' (αἰσθητῶς [ἅμα καὶ νοητῶς]) in a form that outdid everything (Stanza 14). This statement points to a judgment about the church that was strongly rationalised; thus, it addressed both the senses and intellect rather than just the senses, as Paul claimed. When the textual evidence is corroborated, the utilitarian function of the church becomes integral to the building's aesthetic character next to that of the harmony of proportions as an objective property of attractive objects. Such views are in line with Classical conceptions of beauty as an objective. Aristotle, for instance, thought that the senses received pleasure both from a mean between the extremes and from a relation between the extremes.[343] Was the beauty of the church perceived and contemplated for its own sake as an end in itself?

[343] Umberto Eco, *Art and Beauty in the Middle Ages*, trans. by Hugh Bredin (New Haven-London: Yale University Press, 1986), pp. 5-12.

5.1.2 The Finality of the Beauty of Hagia Sophia

By claiming that 'the mind is lifted up toward God and exalted' (ὁ νοῦς δέ οἱ πρὸς τὸν θεὸν ἐπαιπόμενος ἀεροβατεῖ), Procopius defined the finality of beauty for the Byzantines as being the contemplation of the divine.[344] It is at this point that theology, technological wonder and the scenic beauty of the world were encapsulated in the process of appreciating the beauty of Hagia Sophia for a bigger purpose. It is not surprising that the Byzantines thought of beauty as present in the physicality of architectural forms but not as an end in itself. The aesthetic experience transcends its own domain because the mind (νοῦς) is raised aloft to a God who loved to dwell in the church.[345] Although beauty can be objectively manifested and perceived in Hagia Sophia, the senses no longer assist the beholder in the ultimate purpose of aesthetic contemplation. It is rather the intellect that is ultimately engaged in the process of becoming aware of God's presence. It can be inferred that the aesthetic experience is a transformation that releases the senses and ultimately the human intellect from their everyday functioning. It will become one of the marks of the Byzantine aesthetics that beauty is perceived by the intellect, although it engaged all the senses.[346]

The beauty of Hagia Sophia thus became a means which facilitates an encounter with a God who was believed to have already taken steps to be closer to His people through the Incarnation of Christ. The church became invested with a religious content in which the 'archi-text' of Hagia Sophia, understood in terms of the interplay of the divine immanence and transcendence, was mediated by beauty. Although the emphasis was on the subjective transformation of the senses and the human mind inside Hagia Sophia, Procopius still stressed the beauty of the church as an objective quality. Because of its beauty, even God took pleasure in it: 'God must especially love to dwell in the place He has chosen'. On the other hand, according to Procopius, the aesthetical performance of the design started with the comprehension of the fact that

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[344] Procopius, *Buildings* I.i.61-62; Anthony Kaldellis read ἀεροβατεῖ as 'walks upon air', implying an allusion to Aristophanes, *Clouds,* 225 and thus an intended flattery to Justinian, denying any religious connotation; see, Kaldellis, *Procopius of Caesarea*, p. 58.

[345] Procopius, *Buildings* I.i.62.

[346] Slobodan Ćurčić takes this further, claiming that the beauty of churches was never to be comprehensible in a literal sense, nor to function as a springboard for the contemplation of God, but was a symbolic representation of transcendent God as if this reflection operated in a very abstract form; see Ćurčić, 'Architecture As Icon', in *Architecture as Icon: Perception and Representation of Architecture in Byzantine Art,* pp. 3-38, esp. p. 26.

Hagia Sophia could not be the result of any human strength or skill and implied God for its *raison d'être* both in terms of aesthetics and technology:

> Whoever enters this church whenever to pray understands at once that it is not by any human power and skill, but by the decisive influence of God that this work has been completed.[347]

In this way, the overall aesthetic impact of the Great Church was placed by all three Byzantine writers in a complex interaction that encompassed the formal properties of the architectural form, their suitability for a purpose and symbolical attributes. Approached separately, all three views seem to compete as all can be interpreted as plain personal opinions. On the one hand, Procopius claimed that the aesthetic delight was closely linked to the formal properties of architecture. On the other hand, an emotional reward came from that fact that the beauty of the church facilitated the contemplation of God's immanence in transcendence in a symbolic way, but at the same time the beauty of the church resided in its suitability to meet an end. The aesthetic experience can be easily mistaken for a religious experience as Procopius' and Paul' statements allowed a degree of interpretation. However, the inauguration *kontakion* stressed in equal measure the physically of architecture and the activities it allows within its walls, which makes the point that aesthetic experience cannot replace the actual religious feeling. The corroboration of all three views yields the most comprehensive summary of the overall effect of the aesthetic and architectural experiences which culminate in becoming aware of God's presence.

The aesthetic terms can be successfully employed to emphasise the otherworldly character of what was experienced in Hagia Sophia. This explanation fits the recently developed attribution theory as a way of defining religious experience.[348] This theory seeks to understand how people explain religion by paying attention to descriptive elements, while at the same time attempts to elucidate how and why people explain events.[349] The analysis is twofold, making a distinction between attributions and ascriptions. The former are commonsense causal explanations that are deliberately used in explanations of things, while ascriptions result from assigning

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[347] Procopius, *Buildings* I.i.61: ὁπηνίκα δέ τις εὐξόμενος ἐς αὐτὸ ἴοι, ξυνίησι μὲν εὐθὺς ὡς οὐκ ἀνθρωπείᾳ δυνάμει ἢ τέχνῃ, ἀλλὰ θεοῦ ῥοτῇ τὸ ἔργον τοῦτο ἀποτετόρνευται·, English trans. by Dewing, *Buildings*, p. 27.

[348] Ann Taves, *Religious Experience Reconsidered: A Building-Block Approach to the Study of Religion and Other Special Things* (Princeton-Oxford: Princeton University Press, 2009), pp. 88-118.

[349] Taves, *Religious Experience Reconsidered,* pp. 94-99.

qualities to things.[350] Procopius attributed the beauty of the church to God and at the same time ascribed an otherworldly character to the church. The outcome of the ascribing process is the construction of 'special things' through a process of individualisation, or of setting apart, in which people consciously or unconsciously impute values to objects. In the case of attribution processes, the result is the ascription of causality to the things associated with it. The Byzantines imputed a divine character to the church, and thus God was intimately linked to this space. It was God's abode. By explaining the cause-effect of the beauty of Hagia Sophia, the Byzantine writers placed the aesthetic experience of the church into the broader process of becoming aware of God.

5.2 Hagia Sophia's 'Archi-Text' for Contemplation: a Built Cosmos and 'Heaven on Earth' (οὐρανός τις ἐπίγεος)

The second part of this chapter discusses the view of Hagia Sophia as a built cosmos and a 'heaven on earth', in order to examine how the spatial form becomes spiritually relevant in experiencing an otherworldly realm inside the church. The spatial impact of Hagia Sophia is the outcome of several elements, above all the relationship between of various details, such as the dome supported by four arches on a square plan and, the rhythm and concentration of the curved surfaces towards the centre of the nave, as well as the lighting, textures and colours. I will now focus on the individual elements and their relationships, which could have led to the perception of a built cosmos and the sense of a 'heaven on earth' gained through perceptual knowledge while the faithful was within Hagia Sophia's walls. This is necessary because it will help to understand how the sixth-century Byzantine writers ascribed an otherworldly character to the spatial experience of the church.

In my investigation of Hagia Sophia as a built 'cosmos' I aim to show how the vaulting system of the church engaged had a strong visual and symbolic impact and could be contemplated for its cosmological value. The analysis is therefore confined to an exploration of the spatial effect of the vaulting system of the nave, which consists of the dome with its structural elements: pendentives, main arches, western and eastern semi-domes, tympana and exedras. How could these static elements allude to the cosmos?

[350] Ibid., p. 112.

The dome, catching the attention of whoever enters the church, heightens their awareness of Hagia Sophia as a unique space. The dome itself is an architectural 'focus' which sends the mind to the heavenly realm. Placed in the centre of the nave, it suggests beyond doubt the canopy of Heaven.[351] It is the best possible material replica of the firmament and this can be formally supported at different levels. Firstly, there is the formal resemblance between the dome and how the sky is perceived in nature. Secondly, the enclosure at the uppermost level of the church, the rib base, corresponds directly to the impression one gets when observing the horizon. The cornice at the bottom of the dome, penetrated by windows, represents the line where the surface of the earth meets the sky. Thirdly, the ring of windows in the cornice, by allowing light to flood into the upper part of the church, helps to create the impression one gets when observing a crack of dawn on the horizon.

However, a complete representation of the cosmos would require tectonic elements. The main piers of the nave can stand for the earthy component of the cosmos; they signify the four corners of the world. In this way, a basic representation of the cosmos is achieved by a dome suspended on four massive piers. This comes as close as possible to the sixth-century representation of the universe in Kosmas Indikopleustes' *Christian Topography,* albeit Kosmas' universe had the shape of a rectangular box with a vaulted, rather than a domed, roof.[352] It is the representative view of a vaulted universe explained in Scriptural terms and interpreted in a literal way. At its core, it was the concept of the Tabernacle of Moses as a replica of the universe divided into two realms.[353] In Hagia Sophia, because of the resemblance of forms, the arches stretched between the eastern and western piers and the tympana, as well as the pendentives which were mounted on top of the piers and filled the space between arches at right angles to each other, all contributing to the refinement of the representation of Kosmas' universe.

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[351] For the domical shape of heaven held by the Church Fathers, illustrative is St. Basil the Great, *Hexaemeron,* PG 29, 4-208; see for this Mango, *Byzantium: The Empire of the New Rome* (London: Phoenix Press, 1994), p. 171; Hautecœur, *Mystique et Architecture: symbolisme du cercle et de la coupole,* pp. 61-75; Schulz, *Byzantine Liturgy,* p. 44, also note 9, p. 215.

[352] Kosmas Indikopleustes, *Christian Topography,* French trans. by Wanda Wolska-Conus, 2 vols. (Paris: Les Editions du Cerf, 1968); also, Wanda Wolska, *La topographie chrétienne de Cosmas Indicopleustes, théologie et science au VIe siècle* (Paris: Presses Universitaires de France, 1962), pp. 129-132.

[353] Other names include Theophilos of Antioch, Theodore of Mopsuestia, Severian of Gabala, Theodore of Cyrrhus and Pseudo-Caesarius; see, John F. Callahan, 'Greek Philosophy and Church Fathers,' *DOP,* 12 (1958), pp. 29-57, esp. p. 33, Mango, *Byzantium: The Empire of New Rome*, pp. 170-175, Saradis, 'Space in Byzantine Thought', pp. 88-91.

Yet, there is ambiguity in the boundaries of the heavenly and the earthly parts of the cosmos as represented in the design of Hagia Sophia. It is in the area between the semi-domes of the exedras and those of the eastern and western parts of the church up to the pendentives where this ambiguity is most apparent. One gets the impression that the clear line between the earth and the sky is dissipated; the sky infuses the earth. At the same time, the earthly elements exercise their tectonic role at the level of their bases; that is, the floor of the nave. It is only the floor that acts as a horizontally flat surface, and here the earthly domain is perceived with clarity.

On the other hand, it can be argued that the vaulting system of the Great Church equates to the numbers of heavens and the 'Heaven of heavens' as debated in Late Antiquity by the Christians who considered the Earth in the middle of the Universe as a succession of spheres covered by the firmament.[354] There was no church built before Hagia Sophia with a dome resting on hemispheres. In Hagia Sophia, the whole vaulted ceiling of the nave unfolds as a hierarchical firmament constructed on three levels. The first level is created by the semi-domes over the exedras and the barrel vault of the eastern apse. The latter merges into a much larger semi-dome, resting on all three semi-domes of the exedras and eastern apse. This second heaven is the base for the third one, the 'Heaven of heavens' as made material by the central dome. There is a sizeable physical demarcation between all three heavens: the rings of the windows in the lower part of each of the semi-domes as well as the central dome.

The vaulted enclosure of the nave, covered in golden mosaics, mediates the interplay of the internal and external boundaries of the building. The ceiling acts as a surface of transition between the cosmos, containing everything and the church, and the interior space of the church which houses the entire cosmos within it. The quality of light reflected by the iridescent background contributes to the effect of the 'unseen' and the 'seen or familiar' space: the glories of the unseen realm are adumbrated in the golden mosaics and the dome testifies to the visible world because of its formal resemblance to the physical firmament. The dome not only imitates the canopy of heaven through its shape, but also proposes an utter limit of the interior space of the church through its both materiality and opacity. The golden revetment lends a

[354] Representative for a naturalist view of the universe is John Philoponos, who argued that Moses actually saw in the Tabernacle a Ptolemaic spherical universe; see, Clemens Scholten, *Antike Naturphilosphie und Christliche Kosmologie in der Schrift 'De opicio Mundi' des Johannes Philoponos* (Berlin: Walter de Gruyter, 1996). The number of heavens is discussed in detail by Pseudo-Dionysius, *The Celestial Hierarchy, PG* 3, 119-320.

diaphanous aspect to the dome, conferring as closely as possible the main characteristics of the firmament.

As a cosmos, albeit one built by man, the church should confer the idea of unlimited space.[355] This is achieved in Hagia Sophia in two ways. Firstly, there is the sense of spatial expansion in the upper part of the church: the space delineated by the dome seems to aggrandise the space of the eastern and western semi-domes and the smaller semi-domes of the four exedras. Secondly, although the interior of the church is divided into three units, one nave and two aisles, there is a continuity of space at the level of access. Thus, by means of a subtle treatment of the colonnades which mark the nave as separate from the adjoining aisles, spatial cohesion is created on the ground level.

The relation of nave and aisles in Hagia Sophia is, nevertheless, perceived somewhat ambiguously from the former. One is aware of the spaces beyond the colonnades, but at the same time, not able to clearly identify their outlines and experience a sense of their spatial properties. When in the aisles and galleries, one is aware of being outside the nave, yet never completely out of it, as there is the strong feeling of being inside the main spatial body of the church.[356] This can be explained in terms of the centrality and interiority of the building. The sense of centrality in the nave is sustained by the continuity of the colonnades, arcades and cornices all around it, and by the fluidity of the vaulted surfaced high above. All are made up of individual elements, but their interconnectedness emphasises the continuity and unity of the whole rather than the individuality of each.

The idea of the church as a 'heaven on earth' (οὐρανός τις ἐπίγειος) understood as the interplay of immanence and transcendence is supported by decorative system of the church. In Hagia Sophia, the interplay can be physically contemplated through senses (visual, tactile) and rationalised by the intellect. The golden mosaics and shimmering marbles covering vaults and the walls lose their materiality, and the floral elements of the capitals and the cornices reflect the natural scenic beauty of the world.[357] There is a sense of order (τάξις) and controlled disarray

[355] It has also been argued that the church corresponded in spatial and visual terms to the concept of the divine as interpreted by the Neo-Platonist Proclus in his commentary on Euclid. See, Dominic J. O'Meara, 'Geometry and the Divine in Proclus', in *Mathematics and the Divine: A Historical Study*, ed. by Teun Koetsier and Luc Bergmans (Amsterdam: Elsevier, 2005), pp.133-146, esp. pp. 143-145.
[356] Mainstone, *Hagia Sophia*, pp. 258-259.
[357] Robert Ousterhout, 'The Holy Space: Architecture and the Liturgy', in *Heaven on Earth,* ed. by Linda Safran, p. 90.

in Hagia Sophia that parallels the organisation of the cosmos. There is a concord that is not only embedded in the spatial layout of the church but is also apparent at the level of individual architectural elements. The continuous cornice at the main springing level of the vaults gives a strong sense of unity, although it neatly demarcates different surface curvatures which are flat on the walls and spherical on the vaults. There is a lack of conformity in the two-storied arcaded colonnades between the nave and aisles, on the one hand, and between the colonnades at ground and gallery level, on the other. There is no real correspondence between the lower colonnades of the nave, which only has four columns, and the upper ones, which have six; the latter are not only smaller and shorter than the former, but their column-spacing (intercolumniation) is narrower.

The design principle of 'unity within diversity' is consistently employed with the colour arrangement of the wall revetments and the adornment of the columns. Thus, the lower columns of the nave are monolithic shafts of porphyry standing on white marble pedestals, while the upper ones are shafts of *verdo antico.* The walls and piers in the nave are faced with marble slabs arranged in three registers by bands of green and red marble. The archivolts and spandrels above the arches of the lower colonnade are covered with an undercut, lace-like, white marble ornamentation. Discs of porphyry are placed at regular intervals in white inlays that illustrate tendrils and foliage on a dark background. Those above the gallery colonnades are of multi-coloured *opus sectile.* A variety of white capitals adorn the church. The *verdo antico* and porphyry shafts of the main colonnades and exedras are mounted by 'bowl' capitals capped by small Ionic volutes. The rest of the capitals are carved Ionic impost and carved impost blocks, all of white marble.

Although their primary function is to conceal the stones and bricks, the polychromatic wall facings contribute to the dematerialisation of the tectonic structure of the church. The cut and fit of the marble slabs takes away any sense of load-bearing. Even the supporting function of the columns in the colonnade is played down by a lack of correspondence between the two storeys. Thus, the general impression is not of a solid structure of excessive bulk, but of a continuous flow of light along surfaces, interrupted only by the seemingly insubstantial open screens. Sheer lightness is created by the structural and ornamental scheme of Hagia Sophia. The central dome covering the huge bay seems to lose its contact with other structural elements because of the ring of light placed at its base. The passage of light through its

windows is heightened by the golden mosaics and seems to contradict the gravitational forces.

This analysis has showed that the interior space of Hagia Sophia functioned as both the 'spatializing' and 'spatialized' form that structured the whole system of the space where the Byzantines constructed their world-views, explained dogmas and encountered God. It should be noted that by allotting a specific spatial appearance to their Great Church, the Byzantines did not mean that it had the exact appearance of Heaven. However, giving a heavenly appearance to the church changed the way in which the Byzantines talked about their experience of being inside it and how they viewed church spaces in general.

It can be concluded that formal resemblance played an important role in identifying the church with the cosmos and in sensing within its walls a 'heaven on earth'. However, it was primarily the experience of the architectural space as a whole (the spatial relations and decorations) that managed these associations. By complex processes of ascription, what was experienced in Hagia Sophia was incorporated into elaborate units to build aesthetic attitudes and world-views. The overall effect of the architectural experience, explained in aesthetic and cosmological terms, had a far-reaching scope. It impelled the faithful into a unique process that could only be deemed spiritual.

5.3 Excurse: The Architectural Physicality of the 'Archi-Text' for Contemplation

Thus far, I have emphasised the role played by spatial experience in envisaging Hagia Sophia as a built cosmos and a 'heaven on earth'. With its complex vaulting system, the Great Church corresponded in spatial and visual terms to Late Antique cosmological and metaphysical ideas, however differently formulated these might have been. An awareness of God's presence, although realised by the intellect, was grounded in the sensory perception of the architectural setting used for the Liturgy. This means that the *ritual-architectural event*, the interactive relationship between buildings, rituals and congregation, engaged all the senses and the intellect.[358]

[358] For a discussion of the senses of sight, smell, touch, hearing and synesthesia in Byzantine churches, see Liz James, 'Senses and Sensibility in Byzantium,' *AH,* 27 (2004), pp. 523-537, esp. 525-529; for the sense of taste as involved in the Communion, see Georgia Frank, '"Taste and See": the Eucharist and the Eyes of Faith in the Fourth Century', *Church History,* 70 (2001), pp. 619-643.

However, one might argue that the cosmological symbolism could have been achieved in an abstract way, without involving the use of the material and sensual. There is a long tradition of both interpreting the cosmos in terms of religious structures and regarding the buildings themselves as models and copies of the Universe in most of the ancient religions, regardless of formal resemblance.[359] Very often, one encounters in literature statements that this double association between the architectural object and the cosmos had been one of the most successful metaphors used in attempts to make sense of the physical world as well as to design sacred buildings and add value to buildings This tradition, based on the interlinked metaphor of the universe–shrine–replica or the modelling of the universe, could also define those buildings as sacred.[360]

The architectural object as representation of 'the world fabric' is not a novel idea.[361] It has long been argued that earthly buildings were thought as models to scale of the celestial prototype. The architectural objects were set up as reiterations of the prototype – either the celestial object or the idea of the object itself, in places carefully chosen, whose foundations were laid in sacred ceremonies of re-creating the world, at specific times, and their relation to the sky defined by observation. In the Jewish tradition, a sacred place was regarded as an aspect of the heavenly realm situated on earth and was replicated as such in three different Judaic constructions: the ark, the Tabernacle and the Temple of Solomon in Jerusalem.[362] These were built following specific divine instructions, and it was understood that God dwelled in them.

Equally, it was argued that the cosmos could be envisaged as an enlarged model of an architectural object itself, be it a simple house (οἶκος) or a temple (ναός).[363] This was because it was easier to make sense of something abstract, such as the

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[359] William R. Lethaby, *Architecture, Mysticism and Myth,* [1st edn, 1891] (London: Architectural Press, 1974), pp. 9-31; Charles Jencks and George Baird (eds.), *Meaning in Architecture* (Barrie & Rockliff: The Cresset Press, 1969), pp. 178-179.

[360] For a different approach to sacred space and its creators in all religions and cultures, see the concept of *hierotopy* proposed by Alexei Lidov, 'Hierotopy: The Creation of Sacred Spaces as a Form of Creativity and Subject of Cultural History', in *Hierotopy: The Creation of Sacred Spaces*, pp. 32-58.

[361] William R. Lethaby, *Architecture, Mysticism and Myth,* p. 10; Padovan, *Proportion,* pp. 58-79; Harold Turner, *From Temple to Meeting House,* p. 28; also, Robin Gibbons, *House of God, House of the People of God: A Study of Christian Liturgical Space* (London: SPCK, 2006), p. 6.

[362] Steven Fine, *Art and Judaism in the Greco-Roman World: Towards a New Jewish Archeology* (Cambridge: Cambridge University Press, 2005), esp. pp. 57-134.

[363] John Michell, *How the World is Made: the Story of Creation according to Sacred Geometry* (London: Thames & Hudson, 2009). There is the argument that Greek philosophy is very much indebted to architectural and engineering technologies; for this, see Robert Hahn, *Anaximander and the Architects: the Contribution of Egyptian and Greek Architectural Technologies to the Origins of Greek Philosophy* (Albany: State University of New York Press, 2001).

Universe, by a means intelligible to the mind's eye.[364] In this case, the formal resemblance between the buildings and the Universe played an important role in making the latter intelligible.[365] The idea that sacred buildings were copies of the heavenly realm was also entertained by the Neo-Platonists. Sallustius, writing in the fourth century, considered that the gods' providence stretched everywhere and needed only fitness, produced by imitation and likeness, for its enjoyment.[366]

In a Judeo-Christian milieu, the Tabernacle served as a model for, and also a representation of the Universe.[367] However, a discourse on church buildings as sacred spaces and a coherent symbolism of church buildings emerged as early as the fourth century.[368] Eusebius of Caesarea's panegyric on the church at Tyre is the first extant source to develop a theology of the sacred space as opposed to the community of people gathered in prayer which was understood to constitute the Church in the first centuries of Christianity.[369] The panegyric was delivered in 315 in front of an audience gathered for the church's consecration. It had the form of a sermon, where recent events in the life of the Church, such as persecutions and the new status of the Church as a recognised religion needed to be explained from a biblical perspective.[370] Eusebius was a church historian, and this is apparent from the structure of his panegyric, a historical account of the Church's survival through persecutions (1-54) and a spiritual account of its future in the Heavenly Jerusalem (55-72). He considered that the church at Tyre was evidence of the victorious Christian Church, and thus he included the actual description of the building in the historical section (37-45).

Eusebius used both the typological interpretation of the Tabernacle and the Temple next to the Neo-Platonic interpretations of religious buildings.[371] What was visually revealed by the physicality of the architectural object was used as a smooth transition to a theological discussion on divine archetypes. The church was a symbol of

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[364] Padovan, *Proportion,* pp. 58-79.
[365] Ibid., p. 60.
[366] Sallustius, *Concerning the Gods and the Universe* 15, 16, English trans. by Arthur D. Nock (Hildensheim: Georg Olms, repr. 1966), p. 29.
[367] Philo of Alexandria (*De Monarchia* I, II), Josephus (*Antiquitates Judaicae* III. 7.7), Origen (*In Exodum Homilia* IX, 2-4), Clement of Alexandria (*Stromata* V.vi.33.2), Theodoret of Cyrrhus (*Questiones in Exodum* LX) and culminating with Kosmas Indikopleustes (*Christian Topography* V); see, Wolska, *La topographie Chretienne,* pp. 113-131. For a New Testament view of sacred space, see Marie E. Isaacs, *Sacred Space: An Approach to the Theology of the Epistle of the Hebrews* (Sheffield: Sheffield Academic Press, 1994).
[368] McVey, 'Spirit Embodied', pp. 39-71.
[369] Eusebius of Caesarea, *Ecclesiastical History* X.iv.2-72; for a complete analysis of the panegyric, see Christine Smith, 'Christian Rhetoric in Eusebius' Panegyric at Tyre', *VChr* 43 (1989), pp. 226-247.
[370] Smith, 'Christian Rhetoric in Eusebius', p. 237.
[371] McVey, 'Spirit Embodied', pp. 46- 50.

divine presence and protection, which was deemed more wonderful and wondrous to the human mind and soul than the physical reality of the building. Material things symbolised the spiritual Church, which was the 'edifice' of the Son of God and created in His image and likeness.[372] This was the official discourse until the sixth century, when the inauguration hymns gave a compelling understanding of what a church building was and should be. Churches not only marked out the divine presence and of the Christian community, but stood there to represent the 'heaven on earth.'

Although such ideas could have developed independently of the physicality of sacred architecture, it must be stressed that the understanding of the architectural symbolism evolved in parallel to the symbolic understanding of the Byzantine Liturgy as 'heaven on earth.'[373] The Liturgy occurred both in Heaven and on Earth as the congregation imitated the 'choral' movement of the heavenly beings. As a result, the congregation ought to comply with the spiritual realities revealed during the Liturgy in church spaces. It comes as no surprise to find one of the first extant textual evidence on the subject in one of St. John Chrysostom's homilies. The main concern was people's behaviour when attending the Divine Liturgy, as the church building was Heaven itself:

> ... the church is no barber's, neither perfumer's shop nor any other merchant's warehouse in the market-place, but a place of angels, a place of archangels, a palace of God, heaven itself. Therefore if one had rent the heaven and had brought you in here, though you should see your father or your brother, you would not venture to speak, so none here ought to utter any other sound but only those which are spiritual. For in truth the things in this place are also a heaven.[374]

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[372] Eusebius of Caesarea, *Ecclesiastical History* X.iv.55.

[373] Pseudo-Dionysius, *The Ecclesiastical Hierarchy*, *PG* III, 369-584, English trans. by Thomas L. Campbell (Lanham, MD. & London: University Press of America, 1981); for an extensive analysis of the choral movements in the Liturgy according to Pseudo-Dionysius, and in sacred spaces, see Isar, 'Chorography', pp. 78-80. It must be said that Pseudo-Dionysius, belonging to Alexandrian exegetical school, did not contemplate the building as a whole, only the altar, the very locus of the Eucharistic ritual, which imitated the worship of the heavenly beings. For more on this, see Michael Harrington, *Sacred Place in Early Medieval Neoplatonism* (New York: Palgrave Macmillan, 2004), esp. p. 92.

[374] St. John Chrysostom, *1 Cor. Hom.* 36, 5-6 (PG 61:313-14): Οὐ γὰρ κουρεῖον, οὐδὲ μυροπωλεῖον ἡ ἐκκλησία, οὐδὲ ἐργαστήριον ἕτερον τῶν ἐπ' ἀγορᾶς, ἀλλὰ τόπος ἀγγέλων, τόπος ἀρχαγγέλων, βασιλεία Θεοῦ, αὐτὸς ὁ οὐρανός. Ὥσπερ οὖν εἴ τις τὸν οὐρανὸν διαστείλας ἐκεῖ σε εἰσήγαγε, κἂν τὸν πατέρα, κἂν τὸν ἀδελφὸν εἶδες, οὐκ ἂν ἐτόλμησας φθέγξασθαι· οὕτως οὐδὲ ἐνταῦθα ἕτερόν τι, πλὴν τῶν πνευματικῶν φθέγγεσθαι ἔδει· καὶ γὰρ καὶ τὰ ἐνταῦθα οὐρανός.

It can be argued that the Byzantine *ritual-architectural event* was 'heaven on earth' which heightened the bodily sensory experience and religious illumination. The sixth-century inauguration *kontakion* emphasised the Byzantine concern with the spatial forms that had the shape of the firmament in the context of the Eucharistic ritual in which the human prayers imitated those of the angels in Heaven. This understanding is very different from any past cosmological association that had been attempted at a connection between the earthy and heavenly realms through religious buildings. The *kontakion* stressed that Hagia Sophia was used by worshippers to connect to God and to define what they experienced within the church, while they worshipped 'as angels in Heaven'. This view yields the most comprehensive approach to church architecture in which the physicality of architectural forms was valued for its contribution to what the human body could sense and what was ultimately perceived at a spiritual level.[375] The physicality of church architecture was not only validated but held in high regard for its potential to assist all the senses in an effort to transcend the body. Thus, it can be concluded that the holiness of a church building in the sixth century was understood to be linked to what was experienced at all levels: sensory, aesthetic, religious and social.

The architectural symbolism of church buildings was carried on in *mystagogical commentaries on liturgy* from the seventh century until the end of Byzantium.[376] The purpose of such texts was to interpret the Divine Liturgy as a way of leading to the contemplation of God (θεωρία) in which the architectural setting was also considered. Although the texts offer the most refined symbolic reasoning of churches and liturgical furnishing, the stress falls on the liturgical event. Thus, there has been a shift from the physicality of 'this' church 'here' as the inauguration *kontakion* emphasised towards generic church architecture. The church is still 'an earthly heaven, in which the super celestial God dwells and walks about' (ἐκκλησία ἐστὶν οὐρανός ἐν ᾧ ὁ ἐπουράνιος Θεὸς ἐνοικεῖ καὶ ἐμπεριπατεῖ), but the physicality of forms

[375] Ćurčić denied the physical character of churches and emphasised the abstract side of buildings as metaphors and symbols; see, Ćurčić, 'Architecture As Icon', in *Architecture as Icon: Perception and Representation of Architecture in Byzantine Art,* pp. 18-22.

[376] The first proper Byzantine liturgical commentary is considered St. Maximus the Confessor's *Mystagogy* and the last, St. Symeon of Thessalonica's *Liturgical Commentaries*. For a discussion on the Byzantine liturgical commentaries, see René Bornert, *Les commentaries Byzantins de la Divine Liturgie du VIIe au XVe siècle* (Paris: Institut Français d'Études Byzantines, 1966), esp. p. 38.

with its decorations ceases to be the main focus of the texts.[377] With the crystallisation of the Byzantine Liturgy, the 'archi-text' for contemplation needs no longer to be made explicit. Its meaning or spiritual purpose of a church building is sustained by the liturgical event, its purpose explained in ecclesiological terms:

> It represents the crucifixion, burial and the resurrection of Christ: it is glorified more than the tabernacle of the witness of Moses, in which are the mercy-seat and the Holy of Holies. It is prefigured in the patriarchs, foretold by the prophets, founded in the apostles, adorned by the hierarchs, and fulfilled in the martyrs.[378]

[377] St. Germanus of Constantinople, *On the Divine Liturgy* 1, Greek text and English trans. by Paul Meyendorff (New York: St Vladimir's Seminary Press, 1984), p. 57.

[378] Ibid: ἀντιτυποῦσα τὴν σταύρωνιος καὶ τὴν ταφὴν καὶ τὴν ἀνάστασιν Χριστοῦ· δεδοξασμένη ὑπέρ τὴν σκηνὴν τοῦ μαρτυρίου Μωσέως, ἐν ᾗ τὸ ἱλαστὴριον καὶ τὰ ῞Αγια τῶν ῞Αγίων· ἐν πατριάρχαις προτυπωθεῖσα, ἐν προφήταις προκηρυχθεῖσα, ἐν ἀποστόλοις θεμελιωθεῖσα, ἱεράρχαις κατακασμηθεῖσα καὶ ἐν μάρτυσι τελειωθεῖσα.

CONCLUSION: The View From the Church of Hagia Sophia

This thesis began by asking what it means to be in a church building and by looking for a church which could offer an insight into how God's presence could have been experienced by the Byzantines in sixth-century church buildings. To deal with these issues, I designed the concept of the 'archi-text' for contemplation to examine the potential catalyst of church architecture for religious experience and comprehensively mapped users' encounters with the church of Hagia Sophia in Constantinople.

The analysis of the 'archi-text' for contemplation in sixth-century Byzantium began properly with the examination of responses to church architecture as they were recorded in Procopius of Caesarea's and Paul the Silentiary's *ekphraseis* of Hagia Sophia. The reading of these texts focused on the way in which they inform us about the experience of viewing, using and making sense of the spatial layout of the church. In my analysis, I was interested in distinguishing between descriptions of encountering the church or viewing it according to *periegesis* and accounts of exploring or reading the architectural space of Hagia Sophia. In so doing, I was able to establish that Procopius' *ekphrasis* was unique in the Late Antique period as it was the direct result of his first-hand, rationalised experience of the architectural space. The investigation into perceptual metaphors substantiated how the church was experienced and showed that successful rhetorical *topoi* are more engaging when grounded in basic processes of spatial perception. The analysis showed that spatial configurations are experientially relevant when making sense of, and describing buildings. Moreover, Procopius' ordered description of the visual sequences, which are essential in understanding the layout of the church, suggested that Hagia Sophia was perceived as a centralised space.

Because this observation was crucial to the understanding of how Hagia Sophia was experienced, I needed to examine its relevance in Paul the Silentiary's *ekphrasis*. This investigation showed that Paul's account was largely consistent with Procopius'; both writers stress the centrality of the church as a defining spatial propriety of the layout. A further examination of Paul's text revealed that his description was hierarchical, based on the employment of spatial referencing systems. This led me to conclude that Paul's *ekphrasis* was an account of the mental model of spatial

representation, which to a certain extent fixed in its description the experienced natural world. The naturalist imagery, in particular of the natural and artificial light, was used by Paul to suggest spiritual messages of the church.

Hagia Sophia's 'archi-text' for contemplation begun to take a definite shape by examining how the interaction between the church space and its users was described in theological terms in the inauguration *kontakion* composed for the second dedication of the church. The melodist regarded the church building's contribution to sixth-century spiritual life in terms of its theological attributes, because the church was 'a heaven on earth both in shape and in worship'. He used the Old-New Testament typology to develop the functions of Hagia Sophia as a *domus dei,* a place of encounter between God and the faithful as well as of worship that engaged all the senses and the intellect. The symbolic architectural discourse developed throughout the inauguration hymn placed Hagia Sophia within a path led to the contemplation of the divine.

The spatial analysis of Hagia Sophia was centred on the extent to which the spatial layout of the church could induce a well-structured and a gradual, hierarchical spatial experience of its interior as Procopius and Paul described it. Because the Byzantines placed great emphasis on the centrality and interiority of Hagia Sophia and talked about the church as 'heaven on earth', I investigated how a spatial experience imposed by its architectural layout can support such a view. The spatial analysis showed that the articulation of spaces, especially the spatial dominance of the nave, supported spiritual engagement, such as an encounter with God.

The extent of, and the ways in which Hagia Sophia was perceived by its users as a direct catalyst for a religious experience was configured once I had delved into the spiritual implications of the experienced architectural space of the church. The way in which an experience can be deemed religious showed that the 'archi-text' for the contemplation of God could also be articulated in aesthetic and cosmological terms. The beauty of the church was not an end in itself but increased the awareness of God's presence. Any cosmological symbolism became more suggestive when grounded in sensory perception and perceptual knowledge. Experiencing the spatial configuration of Hagia Sophia and its contemplation led to the perception of a 'heaven on earth' within the church building. This experience was ascribed as religious.

In conclusion, this thesis had three main objectives. Firstly, it sought to fill the gap in the present scholarship regarding the way church buildings functioned as spiritual catalysts in Byzantium and to answer the question of what a Byzantine

church building was and was used for in the sixth century. Secondly, the thesis showcased the need for, and the usefulness of, a full engagement with architectural evidence when dealing with literary pieces that described or symbolically interpreted church architecture. Thirdly, by focusing on the spatial analysis which better linked the subjective experience of spaces with the constraints of the architectural layout and modalities of representation and thought in Byzantium, my thesis offered an alternative approach to the examination of the spiritual potential of churches to assist the contemplation of God.

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APPENDIX

ΤΩΝ ΕΓΚΑΙΝΙΩΝ Ο ΥΜΝΟΣ

Prooemium:

Ὡσ τοῦ ἄνω στερεώματος τὴν εὐπρέπειαν
καὶ τὴν κάτω συωαπέδεξας ὡραιότητα
τοῦ ἁγίου σκηνώματος τῆς δόξης σου, κύριε·
στερέωσον αὐτὸ εἰς αἰῶα αἰῶνος
καὶ πρόσδεξαι ἡμῶν τὰσ ἐν αὐτῷ ἀπαύστως προσαγομένας σοι δεήσεις πρεσβείας τῆς θεοτόκου,
|·ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

Strophae: Τὴν ἐν σώματι

α′ Τὴν ἐν σώματι θείαν τοῦ Λόγου ἑορτάζοντες ἐπιδημίαν τῆς αὐτοῦ ἐκκλησίας τὰ τέκνα
πυκασμῷ ἀρετῶν λαμπρυνθῶμεν ἀξίως τῆς χάριτος
καὶ θεοῦ ἄξιον ἀναδειχθῶμεν
φωτισμῷ γνώσεος οἰκητήριον
5 ἐν σοφίᾳ τῆς πίστεως τὰς αἰνέσεις ἐξαγγέλλοντες·
ἡ σοφία γὰρ ἀληθῶς τοῦ πατρὸς ἀνῳκοδόμησεν ἑαυτῇ σαρκώσεως οἶκον,
καὶ ἐσκήνωσεν ἐν ἡμῖν ὑπὲρ νοῦν
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

β′ Ὡς τῶν ὅλων τῷ κράτει δεσπόζων εἰς τὰ ἴδια ἦλθεν ὁ κτίστης, καὶ ὡς ἴδιονν τοῦτον [παρ]ελάβομεν, καὶ ναὸς γὰρ αὐτῷ πρὸς κατοίκησιν προσεγκαινίζεται·
οὐδὲ γὰρ ἄξιον τὸν βασιλέα
εὐτελὲς σπήλαιον ὑποδύεσθαι·
5 διὰ τοῦτο προφθάσωμεν τῆς Σοφίας τὸ ἁγίασμα
ὡς βασίλεια ἐμαφανῶς θεϊκὰ πρὸς ἀνευφήμησιν καὶ λατρείαν τοῦ μυστηρίου, δι᾽ οὗ σέσωκε τὸν κόσμον ὁ Χριστός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

γ′ Νῦν πληρούμενον ὄντως ὁρῶμεν τῆς γραφῆς τῆς ἐνθέου τὸν λόγον· “Εἰ θεὸς μετ᾽ ἀνθρώπων οἰκήσει,”
ὡς ὁ πρὶς Σολομὼν οὐ διστάξων, φησίν, ἀλλ᾽ ἐν θαύματι τοπικὴν σκήνωσιν κατονομάζων τὴν θεοῦ σάρκωσιν δι᾽ αἰνίγματος,

5 καὶ ἐν τύποις τὰ μέλλοντα ἐσκιογράγει διὰ πωεύματος·
τὸν γὰρ ἔμψυχον ἐν παρθένου ναὸν περιεπήξατο ἑαυτῷ † ἀδιαιρέτως, †
καὶ ἐγέωετο μεθ᾽ ἡμῶν ὁ θεός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

δ' ᾽Εν σαρκὶ ἐνοικήσας ὁ Λόγος κατοικεῖν ἐν ναοῖς χειροτεύκτοις εὐδοκεῖ ἐνεργείᾳ τοῦ πνεύματος
μυστικαῖς τελεταῖς τὴν αὐτοῦ παρουσίαν πιστούμενος,
καὶ βροτοῖς χάριτι συνδιαιτᾶται
ὁ τοῖς πᾶσι ἀχώρητος καὶ ἀπρόσιτος·
5 καὶ οὐ μόνον ὁμόστεγος τοῖς ἐν γῇ ἐστιν οὐράνιος,
ἀλλὰ δείκυσι καὶ τραπέζης κοινοὺς καὶ τῆς σαρκὸς αὐτού δεξιοῦται τῇ εὐωχίᾳ,
ἣν προτίθησι τοῖς πιστοῖς ὁ Χριστός ,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ε' Γνωριζέσθω δὲ πλέον {ά}πάντων τὸ θαυμάσιον τέμενοσ τοῦτο τοῦ θεοῦ ἐνδιαίτημα πάνσεπτον
καὶ ἐν τῷ προφανεῖ ἐνδεικύμενοσ τὸ ἀξιόθεον,
τεχνικὴν ἅπασαν ὑπερανέχον
ἐπιστήμην ἀνθρώπινον ἐν τοῖς δώμασιν·
5 οὐρανος τις ἐπίγειος καὶ ὁρᾶται καὶ κηρύσσεται
καὶ μορφώματι καὶ λατρείᾳ θεοῦ· ὅν ἠρετίσατο ἑαυτῷ εἰς κατοικεσίαν,
καὶ ἐν πνεύματι ἐστήριξας αὐτόν,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ς’ Καὶ αὐτὸ δὲ τὸ στερεώμα ἡ σεπτὴ τοῦ Χριστοῦ ἐκκλησία ἐμφανῶς ὑπερβάλλει ἐν δόξῃ·
οὐ γὰρ διαισθητὴν τοῦ φωτὸς λαμπηδόνα προΐσχεται,
ἀλλὰ τὸν ἥλιον τῆς ἀληθείας
θεϊκῶς λάμποντα φέρει ἄδυτον·
5 καὶ τὸν λόγον τοῦ πνεύματος ταῖς ἀκτῖσι περιλάμπεται
ἐν ἡμέρᾳ τε καὶ νυκτὶ εὐπρεπῶς, δι᾽ ὧν τὰ ὄμματα καταυγάζει <τῆς> διανοίας
ὁ εἰπὼν θεός· "Γενηθήτω τὸ φῶς,"
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ζ' ᾽Απ᾽ ἀρχῆς γεγονὸς τὸ στερεώμα τῶν ὑδάτων ἐν μέσῳ ἐράγη, ὡς τὸ γράμμα τὸ θεῖον διδάσκεί·
καὶ ἐπάνω αὐτοῦ ὑγρὰ φύσις <ὡς> εἶναι πιστεύεται,

καὶ τόπον κέκτηται ἐν τοῖς φωστῆρσι,
καὶ νεφῶν <τὰ> σκιάσματα οὐ διέφυγεν·
ἀλλ᾽ ἐνταῦθα τὰ μείζονα καὶ προδήλως ὑπερθαύμαστά·
ἐν ἀρρεύστῳ γὰρ εὐδοκίᾳ θεοῦ τεθεμελίωται ὁ ναὸς τῆς <θεοῦ> Σοφίας,
ἥτις πέφυκεν ἀληθῶς ὁ Χριστός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

η' Ἱερῶν θεωρία ὑδάτων μυστικῶς ἐν αὐτῷ καθορᾶται ἀνηγμέναις ἐννοίαις τοῦ πνεύματος·
νοεραὶ γὰρ αὐτῷ στρατιαὶ πανταχοῦ περικέχυνται
λειτουργῷ σχήματι δορυφοῦσαι
τῆς καινῆς χάριτος τὸ μυστήριον·
τὰ δὲ νέφη τὰ πάνστυγνα τῶν πταισμάτων οὐχ ὑφίστανται,
σκορπιζόμενα μετανοίας θερμῆς εὐχαῖς σὺν δάκρυσι ταῖς ἐνταῦθα προσαγομέναις·
διὸ ἅπαντας ἐκκαθαίρει Χριστός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

θ' Νοητοὺς καθορῶμεν φωστῆρας εἰς τὸ θεῖον στερέωμα τοῦτο τῆς Χριστοῦ ἐκκλησιᾶς προσπαγέντας
ὑπὸ τῆς δωρεᾶς τοῦ αὐτὴν στερεώσαντος πνεύματος,
προφητῶν τάγματα καὶ ἀποστόλων
καὶ διδασκάλους [τε] δόγμασιν ἀπαστράπτοντας
καὶ ἐκλείψεις οὐ πάσχοντας οὔτε λήγοντας οὐδὲ δύντας,
καταυγάζοντας δ᾽ ἐν τῇ [τοῦ] βίου νυκτὶ τοὺς εἰς τὸ πέλαγος πλανωμένους τῆς ἁμαρτίας,
ἣν κατήργησε τῇ σαρκώσει Χριστός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ι' Ἱστορεῖ ἡ θεόπνευστος βίβλος τὸν θεόπτην Μωσέα τὸν πάλαι ἐγκαινίσαι σκηνὴν μαρτυρίου,
τὸν δὲ τύπον αὐτῆς μυστικῶς ἐν τῷ ὄρει θεάσασθαι·
μηδὲ γὰρ δύναθαι διὰ ῥημάτων
τῶν ἀρρήτων διδάσκεσθαι τὸ εἰκόνισμα,
ὑπουργὸν δὲ ἐκέκτητο κληρωσάμενον σοφίαν [ἐκ] θεοῦ
τὸν Βεσελεὴλ ἐκ παντοίων τεχνῶν κατασκευάσαντα <τὰ> ἐν τύποις διαγραφέντα,
ὡς διέταξεν ὁ λαλήσας θεός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ια' ῾Ως σκιὰν ζωγραφῶν τῶν μελλόντων κιβωτὸν <τὴν> περιχρυσωμένην
ἀπὸ ξύλων ἀσήπτων ἐποίει
καὶ τὰς πλάκας αὐτῇ τὰς τοῦ νόμου σεπτὰς ἐναπέθετο
καὶ αὐτὴν ἔφερε μεταγομένην
<καὶ> ποικίλοις καλύμμασι περιέσκεπεν·
5 ἀλλὰ τύποις τὸ ἐκδηλον, οὗ κεκλήρωνται, οὐ [δὲ] μόνιμον·
τῆς δὲ χάριτος ἡ φανέρωσις [ὑπερφυὴς] πᾶσι γνωρίζεται ὡς παγίως
ἐρηρεισμένη,
καὶ ἐστήριξεν εἰς αἰῶνας Χριστός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ιβ' Νομοθέτην ἡμεῖς τὸν σωτῆρα κεκτημένοι, σκηνὴν παναγίαν τὸν
θεάρμοστον ἔχομεν τοῦτον
ναόν, ἐν Βεσελεὴλ βασιλέα πιστὸν προβαλλόμενοι,
ἐκ θεοῦ πίστωσιν τῆς ἐπιστήμης,
τὴν σοφίαν τῆς πίστεως εὐπορήσαντες·
5 κιβωτὸς δὲ πανέντιμος ἡ θυσία ἡ ἀναίμακτος,
ἣν οὐκ ἔτρωσε σηπεδών [ἀ.....ίας]ποτε, ἣν καταπέτασμα ἀπ <...> σκιάζει,
ὅτι πέφυκεν [ἡ] ἀληθείᾳ Χριστός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ιγ' ῾Ο καρδίας κεκτημένος χύμα Σολομὼν ὁ περίδοξος ᾄδει τὸν ναὸν ἐν
᾽Ιεροσολύμοις
ἐγκαινίσας ποτέ, καὶ κοσμήσας λαμπρῶς ἐπηγάλλετό·
καὶ λαὸν ἅπαντα ᾽Ισραηλίτην
θεατὴν ἤθροιζε τοῦ σπουδάσματος,
5 καὶ θυσίαις ἐγέραιρον <καὶ> ἐν ὕμνοις τὰ ἐγκαίνια,
καὶ ὀργάνων δέ μουσικῶν ταῖς ᾠδαῖς ἦχος ἐμέλπετο συμφθνίᾳ
ἑτεροφθόγγῳ·
ἀνυμνεῖτο γὰρ ἐν ἐκείνοις θεός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ιδ' Ὑπὸ πάντων ἐπίκλητος τόπος τοῦ τῷ ὀνόματι εἶναι ὁ ναὸς ἐθρυλεῖτο
ἐκεῖνος,
καὶ εἰς τοῦτον ὁ πᾶς ᾽Ισραὴλ ἐπειγόμενος [συν]ἔρρεε
νομικῇ μάστιγι συνηλασμένος,
ἐν αὐτῷ γὰρ προσέφερον τὰ καρπώματά·
5 ἐν ἡμῖν δὲ τὰ κρείττονα καὶ βεβαίως [γὰρ] ἀνευφήμουν <ἄν>·
ἀνεδείχθη γὰρ ἀληθῶς αἰσθητῶς [ἅμα καὶ νοητῶς] τὸ μεγαλούργημα
ὑπεραῖρον τοῦτο τὸ θεῖον
ὑπὲρ <ἅ>παντα, ὃ στηρίζει Χριστός,

|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ιε' Μέγας ὁ τοῦ θεοῦ ἐστιν οὗτος καὶ εὐμήκης οἶκος, ἐροῦμεν καὶ ἡμεῖς τῇ γραφῇ ὁμοφώνως·
οὐ γὰρ ἔθνους ἑνὸς ἀθροισμῷ ὥσ<περ> πάλαι δοξάζεται,
ἀλλὰ τοῖς πέρασι τῆς οἰκουμένης
διαβόητος πέφυκε καὶ σεβάσμιος·
ἐν αὐτῷ γὰρ προστρέχουσιν αὐθαιρέτως, οὐκ ἐκ βίας τινός,
ἐκ παντὸς ἔθνους τοῦ ὑπὸ [τὸν] οὐρανόν, ὅθεν καὶ ἄπιστοι μετὰ θάρσους ὁμολογοῦσιν,
ὡς ἐστὶν αὐτοῦ ὁ οἰκήτωρ θεός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ις' Νοητῶς αἱ θυσίαι ἐνταῦθα ἐν τῷ πνεύματι καὶ ἀληθείᾳ, οὐκ ἐν κνίσσαις καπνῶν καὶ αἱμάτων ῥοαῖς
ἀνενδότως θεῷ εἰς ὀσμὴν εὐωδίας προσάγονταί·
προσευχῶν δάκρυα μετ᾽ εὐλαβείας
καὶ φαλμῶν ᾄσματα πρὸς κατάνυξιν
ἐν ὀργάνοις τοῦ πνεύματος μελῳδούμενα, [καὶ] κοιμίζοντα
τὰς ἐκ τῶν παθῶν δαιμονίους ὁρμάς, ἡδονὴν σώφρονα <ἐμ>ποιοῦντα εἰς σωτηρίαν,
ἣν δωρεῖται τοῖς ἀνθρώποις ὁ Χριστός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις.·|

ιζ' ᾽οφδαλμὸν τῆς καθόλου ὁρῶμεν ἐκκλησίας τὸν πάνσεπτον τοῦτον ἀληθῶς καὶ πανεύφημον οἶκον·
πλησθησόμεθα οὖν τοῖς αὐτοῦ ἀγαθοῖς, καθὼς γέγραπται,
τῷ θεῷ ψάλλοντες· "῎Αγιος ὄντως
ὁ ναός σου, θαυμάσιος [ἐν] δικαιότητι·
τῆς τῶν ἄνω ἐκτύπωμα λειτουργίας γνωριζόμενος,
† ἀγαλλιάσεως καὶ † σωτηρίας φωνὴν καὶ τῶν ἐν πνεύματι ἑορτάζοντων ἔνθα ἦχος·
ὃν συνίστησιν ἐν ψυχαῖς ὁ θεός,
|· ἡ πάντων ζωὴ καὶ ἀνάστασις. |

ιη' Σύ, σωτήρ, ὁ τεχθεὶς ἐκ παρθένου, διαφύλαξον τοῦτου τὸν οἶκον ἕως τῆς συντελείας τοῦ κόσμου,
εἰς αὐτὸν δὲ οἱ σοὶ ὀφθαλμοὶ προσεχέτωσαν πάντοτέ·
[καὶ] τὰς φωνὰς πρόσδεξαι τῶν οἰκετῶν σου

καὶ εἰρήνην τῷ λαῷ σου χαριζόμενος [καταπέμφον]
τὰς αἱρέσεις ἐκδίωξον καὶ βαρβάρων ἰσχὺν σύντιψον,
ἱερεῖς δὲ καὶ βασιλέα πιστοὺς πάσῃ συντήρησον εὐσεβείᾳ κεκοσμημένους
καὶ ἡμῶν σῶσον τὰς ψυχὰς ὡς θεός,
ⵑ· ἡ πάντων ζωὴ καὶ ἀνάστασις."·ⵑ